AMERICAN ARTISAN and Hardware Record

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Founded 1880 by Daniel Stern

Thoroughly Covers the Hardware, Stove, Sheet Metal, and Warm Air Heating and Ventilating Interests

AMERICAN ARTISAN and Hardware Record

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WANTED—MORE REAL SPECIALTIES

While it is true that there are too many so-called "specialties" — trade-marked articles which to all intents and purposes are so much alike that there can be no real reason for choosing one in preference to another—it is also true that in another sense there are not enough real specialties.

For example, we have dozens of brands of hammers, but only a very few of them have any point of real distinction or actual superiority over the rest.

We have approximately two hundred and fifty different lines of kitchen ranges, but you can count those which possess a truly important feature over the others on your fingers and toes.

There are about a hundred and fifty different makes of warm air furnaces, but it would be difficult to name a score that really stand out as superior in some important respect.

Most of the articles mentioned are of some merit or they would not enjoy a steady sale, but the fact remains that there seems to be a lack of that something which will make any of them especially desirable.

The natural result of this situation is that the effort which must be put forth to produce sufficient sales must be so much greater that it is a question whether it would not be better policy to put more energy into the research laboratory or the testing department of manufacturing plants to analyze some special feature of the particular article that could be improved in such a way as to make it stand out so prominently that the sales resistance would be lessened to a considerable degree.

That this can be really be done has been demonstrated in so many cases that it is a wonder more manufacturers are not showing evidence of the progressiveness of which these real special features are the proof.

Why, for example, do so many men almost unconsciously go to the store that specializes on Hart, Schaffner & Marx clothing?

"All wool," is the answer.

Why is it next to impossible to persuade some women to wear any other corset than Gossard?

"Front lace," is the answer.

It is impossible to instill real enthusiasm into a salesforce for an article which in all its essential features is just like a dozen others.

Let it be first class in every respect—made of good material, carefully made and nicely finished—

There still remains the fact that it is no better than a dozen others.

In the long run it means that the manufacturer's sales department must operate at heavier cost. The jobber's salesmen will neglect it, which means greater percentage in selling expense; the retailer and his salesmen must spend more time in convincing the customer that the article is really what he ought to have and that the price is fair—at greater selling expense.

A real specialty always sells easier and brings better profits to all.

Random Notes and Sketches.

By Sidney Arnold

In order to be resultful, cooperation must be intelligently applied with a full understanding of the purpose to be achieved, declares E. C. Haas, Le Mars, Iowa, field secretary of the Iowa Retail Hardware Association.

To explain his meaning, he relates the following incident:

A well-dressed man stood for several minutes watching a brawny expressman tugging at a heavily laden box almost as wide as the doorway through which he was trying to move it.

Presently the onlooker approached and asked:

"Like to have a lift?"

"Thanks, I would," the other replied, and for the next five minutes the two men, on opposite sides of the box, worked, lifted, puffed and wheezed, but the object of their attentions did not move an inch.

Finally the well-dressed man straightened up and said between puffs:

"I don't believe—we can—ever get—it out."

"Get it out?" the drayman roared. "Why, you idiot, I'm trying to get it in!"

* * *

Henry Squibbs, of the American Steel & Wire Company, was discoursing the other day at the Hardware Club of Chicago on the superstitions of the "poor whites" in the South and cited the following case as an example of how queer their ideas run:

A Florida "cracker" was dead certain that there was no such thing as a ghost:

"Don't believe in them," he stated, "but I did once. One night I wakes up in my cabin and hears somethin' slooshin' across the floor. Spooks, I thinks. It was so creepy-like. Scared? Well, I reckon. But I gets the nerve to crawl out of bed an' to light a match and then I'm cert'nly plumb ashamed of myself an' I ain't never believed in spirits since.

"Why, it weren't nothin' in the world except jest big, common, mean, sneaky rattlesnake."

* * *

"Sometimes things are not what they seem to be," said Palmer Holmes, manager of the Chicago plant of the Lalance & Grosjean Manufacturing Company, and then he told the following story:

A small boy entered the grocery store and demanded in shrill tones:

"Ma wants two pounds of butter exactly like what you sent her last. If it ain't exactly like that, she won't take it."

"Some grocers," remarked the proprietor of the store blandly, turning to a group of onlookers, "some persons in my business don't like customers who are particular, but I delight to serve them."

"Be sure you get the right kind," reiterated the boy, while everybody listened. "A lot of Pa's relatives are visitin' at our house, and Ma doesn't want 'em to come again."

* * *

Of course, there is a limit to will power.

"Josh" Billings of Payson Manufacturing Company, Chicago, Illinois, cites this example:

Old Mose was wrestling with a balky mule, when a bystander asked him: "Why, Mose, where's your will-power?"

"Mah will-power's all right," came the reply, "but you ought ter come out an' see dis yar animal's won't-power."

* * *

Talking about responsibilities, Al Friedley of Friedley-Voshardt Company, Chicago, Illinois, narrates this touching tale:

"Honey," said the colored suitor, "when we gits married you ain't gwine to give up dat good job you has workin' for de white folks, is you?"

"But ain't we gwine to have no honeymoon an' take a trip on de train somewhere?"

"One of us might go, honey. Dey ain't a thing holdin' me, but you's got 'sponsibilities."

* * *

Considerable ingenuity is used to avoid work by some persons, says Henry E. Schwab, vice-president and secretary, R. J. Schwab & Sons Company, Milwaukee, Wisconsin.

He quotes an instance, as follows:

For four consecutive nights the hotel proprietor watched his fair, timid guest fill her pitcher at the water tap.

"Madam," he said on the fifth night, "if you would ring, this would be done for you."

"But where is my bell?" asked the lady.

"The bell is beside your bed," he replied.

"That the bell?" she exclaimed. "Why, the boy told me that was the fire alarm, and that I wasn't to touch it on any account."

* * *

The other day, a typical lounge lizard, with varnished hair and highly manicured finger nails, was introduced to Louis Kuehn, president and treasurer of the Milwaukee Corrugating Company.

In the course of the conversation, the lounge lizard remarked:

"A holdup man knocked me senseless about a year ago."

"Why don't you see if something can't be done about it?" asked Friend Kuehn.

* * *

J. C. Knox of the Waterloo Register Company, Waterloo, Iowa, gives an example of references, thus:

Two darkeys came up to the outskrits of a crowd where Pat Kelly was making a campaign speech.

After listening to the speech for about ten minutes, one of them turned to his companion and asked: "Who is dat man, Sam?"

"I don't know what his name is," said Sam, "but he certainly do recommen' hisself mos' highly."

The Proof of the Stove Is in the Pudding, and That Is, Undoubtedly, the Most Effective Way to Sell It.

In Other Words, You Will Derive the Greatest Volume of Sales from Frequent Cooking Demonstrations of Stoves in Your Store.

YOU can take the best set of saws, hammers, chisels, and planes that were ever produced by the genius of the craftsman and with them you can spoil a thousand dollars' worth of lumber in a week's time.

No sensible person would blame the maker of the tools for the damage produced by them.

The fault lies in the wrong use of them.

Properly manipulated, this same set of tools can be made the instruments for the production of the finest carpentry.

Wonderful cabinets, artistically panelled doors, gracefully designed buffets and scores of other objects which delight the eye and minister to the comforts of life can be made with these tools.

Similarly, you can take the finest cooking stove or range and spoil a thousand dollars' worth of food in a week's time.

The qualities of usefulness, workmanship, and accurate performance are properties which can not be put into effect without intelligent use of them.

The saw must be correctly guided by the hand of the workman.

The nail must be correctly driven.

The plane must be properly held and directed.

Also, the stove must be intelligently used in order to produce the right results.

No one is born with a complete set of ideas.

Neither is any one born with a full knowledge of the delectable art of cooking.

This must be acquired by practice and study.

The better the tools which the craftsmen use the better are the products turned out by them.

The modern stove is a tool of precision and, naturally, it requires practice to use it effectively.

Now, the average hardware dealer who sells stoves knows these things to be true.

But he has fallen into the habit of presuming that most people know how to use a cooking stove to the best advantage.

Of course, in our day with all the restaurants, luncheon counters and cafeterias there are not as many trained people in the homes who know how to cook as there were in the days of the past generation.

The hardware dealer who sells stoves should take these facts into consideration in his selling plans.

He can do an actual service to his patrons and at the same time largely increase his own profits by showing people how to use stoves in the homes to the best advantage.

In other words, by giving demonstrations of what can be done with a good stove he not only can sell more stoves but he can gain the good will and the lasting gratitude of many a householder whose digestive apparatus is frequently outraged by the sort of stuff turned out from really good stoves.

Go into any of the big department stores which have a section devoted to stoves and almost any day of the week or hour of the day you will find a demonstration going on.

You can sample delicious pastries, vegetables, and roasts cooked with the stove featured by the department store.

There is no reason why the hardware dealer can not get a proportionate amount of business by following the same methods.

You may be sure that no department store would pay a day's wages to a demonstrator week in and week out, buy meat and vegetables and distribute them free in cooked form day after day, if large profits were not derived from such an expenditure.

Don't forget that cooking is an essential thing.

Poets and philosophers, teamsters and musicians, pessimists and optimists all have to eat.

Most of us like to eat appetizing food.

It might be well here to quote a passage from the August issue of the Delineator by Joseph Conrad, the famous novelist, on good cooking:

"Good cooking is a moral agent. By good cooking I mean the conscientious preparation of the simple food of every-day life, not the more or less skillful concoction of idle feasts and rare dishes.

"Conscientious cooking is an enemy to gluttony.

"The trained delicacy of the palate, like a cultivated delicacy of sentiment, stands in the way of unseemly excesses.

"The decency of our life is for a great part a matter of good taste, the correct appreciation of what is fine in simplicity.

"The intimate influence of conscientious cooking by rendering easy the processes of digestion promotes the serenity of mind, the graciousness of thought, and that indulgent view of our neighbors' failings which is the only genuine form of optimism.

"Those are its titles to our reverence."

The big fellow gets rich by a proved method which appeals to the senses of the people and pleases them.

The little fellow can better himself by following the same plan.

Take, for example, the Corn Products Company, one of the greatest corporations of our day.

This company sells an oil for

cooking and it sells it by demonstrating it in conjunction with food.

A recent example of the methods of demonstration is given in the August issue of the Magic Chef, published by the American Stove Company. The demonstration was held in Manitowoc, Wisconsin.

The Manitowoc Gas Company and a local furniture dealer cooperated in the building of a model kitchen on the stage of the opera house.

In addition to a kitchen cabinet and refrigerator, a Lorain-equipped range was prominently displayed.

Newspaper advertisments brought in the spectators, the demonstration being held under the auspices of the local newspaper.

The first day's attendance was 275—composed of 225 Manitowoc housewives and 50 members of the Domestic Science Class of the local high school.

This number increased every day of the demonstration until on the fourth day there were over 400 present.

The Corn Products demonstrator at every opportunity emphasized the advantages of the Lorain.

At the conclusion of the demonstration the local gas company auctioned off a Lorain-equipped gas range which had been on display in the lobby of the opera house.

Each bidder turned in her name and address.

In this way a number of names of good prospects were secured.

The high bid, by the way, was $75, which is $5 less than the regular retail price.

There was also on exhibit another Lorain-equipped stove which was given away as the prize in an "Oldest Range Contest."

This stunt also produced an additional number of names of prospects.

All this is a bunch of hints to Lorain dealers to "go thou and do likewise." It certainly turned the trick in Manitowoc.

It won't cost you much to put on a demonstration.

The food which you use in the demonstration and the money which you pay to the demonstrator will be so small in proportion to the profits from the sales that both can easily be absorbed in your overhead without being noticed.

Use your window for the demonstration.

Give liberal samples to those who seem to be good prospects.

You will sell stoves this way.

Malleable Iron Range Company Announces New Vice-President.

F. W. Rogers, President of the Malleable Iron Range Company, Beaver Dam, Wisconsin, makers of Monarch and Paramount Malleable Ranges, on August first, purchased the interest of A. G. Hill, Vice-President of the Company.

Mr. Hill has been inactive in the management of the business for the past two years.

A. R. Gould will be associated with Mr. Rogers as Vice-President of the Company, assuming the duties of this office on September first.

Mr. Gould was previously connected with the St. Louis Malleable Casting Company, having a wide experience in the manufacture of malleable iron and thoroughly familiar with making stove castings.

Mr. Rogers' acquaintance in the range industry is widespread, and from Chicago to the Pacific Coast he is well known throughout the hardware and furniture trade.

His association with the Malleable Iron Range Company covers a period of 20 years.

Previous to the last ten years, he made many trips to the Pacific Coast in the interest of the Company.

For many years, Mr. Rogers has been actively engaged in the stove and range industry, and prior to his association with this Company, represented two of the oldest and most widely known stove and range manufacturers in the country.

The Malleable Iron Range Company operates one of the largest and finest equipped malleable range plant, and at the present time is building an addition to the large plant, as well as remodeling other departments efficiently to handle the increased sale of Malleable coal-wood ranges and Paramount Malleable gas-coal ranges.

Southern Stove Manufacturers Will Meet August 28, 29.

The next regular meeting of the Southern Association of the Stove Manufacturers will be held August 28th and 29th, in the Signal Mountain Inn, Signal Mountain, Tennessee.

Good fellowship, friendly cooperation in the development of high standards of workmanship and service, and constant effort toward better conditions in the stove industry are the main purposes of this progressive organization.

Stove Company Is Incorporated.

The Reliance Stove and Manufacturing Company, Pittsburgh, Pennsylvania, has been incorporated with a capital stock of $15,000.

John Fischer, H. H. Feldman, and S. N. Fischer are the incorporators.

Tell the People Your Prices in Advertisements.

From the angle of the Golden Rule as well as from the point of view of advantage to yourself, tell the people your prices when you advertise.

Cost is the big word with the advertiser himself.

Usually it is an even bigger word with the consumer.

Tell him everything on earth about your stuff and when you get through he will ask you one question and only one:

"What does it sell for?" He likes to see that question answered in the advertisements, if only as an evidence of good faith.

In ordinary fairness to the consumer, if for no other reason, he ought to be told what he will have to pay for the thing he is urged to buy.

Cost means as much to him as it does to the manufacturer or the retailer.

Events and Progress of the Hardware Trade.

What the Retailers, Jobbers and Manufacturers Are Doing. Latest Selling Methods and Experiences of Successful Men.

Illinois Hardware Firm Adopts Cash Policy.

Of much significance to hardware dealers are the reasons why E. M. Mulliken & Sons, Humboldt, Illinois, have adopted the policy of selling only for cash.

As set forth in the bulletin of the Illinois Retail Hardware Association, the reasons are as follows:

Twice lately we have been compelled to sue in order to make collections of accounts that were made in good faith and then the parties tried in every conceivable way to escape settlement.

This is the only part of our business that we dislike and only use this method of collecting when all others have failed, but in order to protect ourselves and our honest customers, we have to resort to legal methods occasionally.

However, we expect to overcome all this after the first of the coming year by selling for *cash only* and to one and all on the same terms.

In this manner we will not only be able to give you better service, but much better prices.

We will be able to sell all our merchandise for at least 5 per cent less and some articles for 10 per cent under present prices.

We fully realize that there are times when it is hard to raise the cash to purchase what really is needed, but we have an organization in town that makes its entire revenue off of loaning money and there is the place to go for your loans.

We do not like to encroach upon their business nor do we like to start a second bank in Humboldt, but this has been literally true for the past two years.

We appreciate very much the patronage that has been accorded us during the past 31 years and trust that we may still receive the same or more.

The policy of this store has always been that of fair treatment to all, aiming to sell the best quality of merchandise at the lowest possible price consistent with good business and we expect to continue this policy and we can do it better than ever when we sell strictly for cash.

There is no doubt but what some of you will get sore when you ask for credit and are refused, but our terms will be the same to all, regardless of whether he is land-owner or tenant, hired man or merchant, white or black, male or female.

It would not do to discriminate and we do not expect to.

We might add that we are not opening any new accounts since July 1st, but will endeavor to take care of our present customers that desire credit until after they have had a chance to harvest their present crops.

We want your trade and would like to have your credit, but we simply are not in a position to carry it.

We will give you more merchandise for your dollar than ever before, and more than you can get anywhere, regardless of place.

Chicago Retail Hardware Association Gives Thanks.

To American Artisan and Hardware Record:

In behalf of the Chicago Retail Hardware Association, this committee wishes to thank you for your donation of prizes and purchase of tickets.

We also wish to thank those who so willingly assisted us in the preparation of and also at the Outing, July 19, 1922, for, without their cooperation, the committee could not have made the picnic the success it was.

We also wish to mention that more hardware dealers, jobbers and manufacturers are attending this affair every year, (this year an increase of over twenty-five per cent) which gives the committee an inspiration to do better work each year and also makes them feel that their hard work has not been in vain.

Hoping that the future committees receive the same courteous treatment that we have, we remain,

Entertainment Committee,
Wm. Triesselmann, Chairman,
Chas. Stasek,
David Zweifel,
John Smith,
P. Haake.

New York Hardware Dealers Will Have Outing and Field Day.

The Hardware and Supply Dealers' Association of Manhattan and Bronx Boroughs, Incorporated, announce their 11th Annual Outing and Field Day, to be held at the Rainbow Inn, Rye Beach, New York, on Thursday, September 7th, 1922.

Arrangements have been made for boat to leave the Dock Department's Dock at East 21st Street, at 9 o'clock in the morning, sharp.

Sandwiches, cigars and refreshments will be served on the boat. Arriving at Rye Beach, breakfast will be waiting for all.

During the afternoon there will be a baseball game, swimming match, races and other games; at 5:45 p. m. all will sit down to a special shore dinner, after which there will be a pleasant sail home by moonlight.

Knife Company Is Incorporated.

Articles of incorporation have been obtained by the Thomaston Knife Company, Thomaston, Connecticut.

The capital stock is $50,000, and the incorporators are H. S. Hitchcock and others of Woodbury, Connecticut.

Suggestions and Plans for Window Displays.

Instructive Examples from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

EMPHASIZES TRADE-MARK IN WINDOW DISPLAY.

In many of the large cities there are office buildings of fifteen and more stories.

If you were in New York, for example, and a man on the twenty-first floor of the Woolworth building had a hundred dollars to pay you, it is not likely that you would walk up the twenty-one flights of stairs to reach his office.

You would want to get that hundred dollars with the least amount of delay.

You would avail yourself of one of the elevators and reach the twenty-first floor in a minute or two instead of spending an hour or more climbing to that height.

Why not apply the same reasoning to your business?

In your natural trade territory there are hundreds of people who have all the way from one to one hundred dollars waiting for you.

That is to say, you can make that much profit from selling them things they need.

The problem for you, then, is to reach them as quickly as possible and with the least amount of labor and effort on your part.

Window Exhibit of Tools, Designed and Arranged by Ray Guest for George W. Stewart Hardware, Washington, Iowa.

Comparable with the elevator which carries you swiftly to the twenty-first floor of the big Woolworth building is the rightly designed window display of trade-marked articles which quickly gains for you the attention of prospective and profitable customers.

The trade-mark is the result of intelligent service and fair dealing.

No trade-mark can survive which has not these forces behind it.

Consequently, the trade-mark of an established hardware commodity is to the great majority of people the proof of these virtues.

The people are already favorably disposed by experience and education to place confidence in the dealer who is intelligent enough to serve them with established, trade-marked goods.

Therefore, one of the most potent factors in quick merchandising is the featuring of trade-marked commodities.

This is a commendable feature of the window display shown in the accompanying illustration.

This window exhibit was designed and arranged by Ray Guest for George W. Stewart, Hardware, Washington, Iowa.

Mr. Guest describes this window display as follows:

The large Keen Kutter trade-mark, on the glass, I outlined with yellow, and all around it filled in with vermilion red.

The letters Keen Kutter, on the glass, I also painted yellow.

About six feet back of the large Keen Kutter trade-mark, was placed a very much smaller K K design; and a framework made so as to taper the top, sides, and bottom from the large design to the smaller.

This framework was covered with white crepe paper and paper bearing the Keen Kutter design.

All edges and corners were cov-

ered with vermilion red streamers, so as to make the design more effective.

I placed 60 watt electric lights all around the edge of the smaller K K design, and filled in the blank space with the red crepe paper.

The different sizes and styles of saws I placed on the sides of the K K frame.

On the bottom were planes, hatchets, wood bitts, pliers, and braces.

In the "V" were hammers, draw knives, levels, dividers, calipers and squares.

On the sides at the very top were screw drivers, sliding T bevels and figure 4s.

On the top were placed show cards representing different scenes as to how tools were used.

In the small K K design were arranged all sizes of wood chisels.

This window could be seen a block and a half away and not only attracted the attention of the men and boys, but the ladies and girls as well.

Most of the time, there was a number of people looking at the window and at night when it was all lighted up it drew a large crowd.

When I started out to decorate this window, I had intended just to outline the Keen Kutter trade-mark on the glass, but kept working on it until I had the present display.

Here Are Rules for Gainful Window Advertising.

1. Keep your windows clean. Have them washed frequently. If your own employes haven't time, get outside help. It will pay.

2. Don't crowd your window.

3. Avoid the other extreme. Too little in a big window will cause the merchandise to be "lost."

4. Card holders are useful. They'll keep price cards from falling over on their faces.

5. Make your display attractive to the eye—and the purse—but don't make it so "pretty" that the merchandise is forgotten.

6. Make your store front reflect you. It is the exterior which most people see. Impressions are made by exteriors.

7. Put the emphasis on the goods, not on the decorations.

8. Use art only to create a desire to buy the goods displayed.

9. Be sure your window lighting is the best obtainable.

10. Have the backing of your window high enough to shut off the view of the store interior.

11. To express coolness in a window use gray, light green or light blue for the color scheme.

12. To show warmth use reds, yellows, oranges—warm colors.

13. Dust out the window space frequently.

14. Never allow soiled or fly-specked cards or merchandise to remain on display.

15. To help the eye to travel quickly from a card to the object displayed, connect the two with tape or ribbon. An arrow will have the same effect.

16. Invest a little money in stands on which better to display your merchandise. It will pay.

17. Empty cigar boxes make good "building blocks" to erect most any size or shape foundation for a display.

18. Crepe paper, bunting and cheesecloth are inexpensive coverings and draperies.

19. Make your display fit the season.

20. Get ideas from merchants in other lines of business.

21. Plan your displays ahead—days and even weeks ahead.

22. Get all material ready for the new arrangements before the old display is taken out.

23. Keep a "window note book." Jot down in it ideas which you see and may use later.

Acquires Hardware Store.

Announcement has been made of the sale of the stock of the hardware, stove, furnace and implement store owned by D. T. Gano at Clinton, Illinois, to J. B. Wilson. Mr. Wilson intends to take over the store the last of this month and will continue the business in the present location.

The store occupies all of a three-story building and is located on the south side of the square in Clinton. The building has housed a hardware store for many years and the past owners have enjoyed a good business. DeWitt County is Mr. Wilson's old home and his return is a pleasant surprise to his many friends in that section.

The new firm will be known as J. B. Wilson and Son. Mr. Wilson's son, Mr. J. Scott Wilson, will be associated with him in the business.

Wire Goods Company Obtains Illinois Charter.

The Wire Goods Company of Massachusetts, 6126 South La Salle street, Chicago, Illinois, has been incorporated with $1,000,000 capital stock.

Reginald Washburn, Irving A. Green, and others are the incorporators.

Outlook for Better Business Is Encouraging.

General business conditions are on a sure road to normal, according to a canvass of about sixty-five industrial leaders in all sections of the country made by purchasing department of the Western Electric Company.

The company, through a questionnaire, carried on an investigation in order to familiarize itself with every trend in the world of commerce.

The result discloses virtually universal optimism among manufacturers and sellers of raw materials.

Their collective opinion, given at a time when the usual Summer dullness might adversely influence optimism if it were only temporary, it is pointed out, is significant.

The questionnaire requested the following information:

The extent which improved business has affected the value of production in your plant, and in the general line of industry of which you are a part?

Do you consider the present stimulus temporary or permanent?

What would contribute most to

stable and healthy conditions throughout the country?

W. F. Backer, general purchasing agent of the Western Electric Company, who carried on the investigation, said:

"All of them with the exception of the coal executives agree in reply to the first query that the present output is entirely satisfactory.

"In many cases it is far beyond the pre-war figure, although to some extent increased plant capacity leaves considerable room for increase before there will be any close approach to the ultimate maximum.

In several instances producers enthusiastically stated that as individual concerns their companies are far ahead of their own industries.

"The improvement is particularly noticeable in paint circles, where the output has jumped from 60 per cent to full capacity.

In the wire and strand trade production has doubled, and in the brass field factories are working at full blast although up until six months ago they reported a 60 per cent slump.

"Replies to the second question indicate no undue optimism regarding a rapid general improvement in the near future.

"While all hold out the promise of good business for the balance of the year, none of the manufacturers anticipates any 'boom' business.

"Opinions regarding the factors needed to stabilize national conditions," says Mr. Backer, "are not as varied as might be expected.

"The three factors mentioned most frequently are a final and fair settlement of the coal and railroad strikes, the improvement of conditions in Europe and a general liquidation and stabilization of labor."

Fault-Finding Customer Helps You Correct Defects.

Quite contrary to the general opinion of merchants, the customer who returns to register a complaint over a faulty piece of merchandise or some neglect of service, is probably the most valuable customer of all, says *The Allen Monthly.*

That's the statement that a prominent Chicago merchant made the other day.

He went on to explain that it was only the "kicker" or the "crank" who helped the merchant to find the weak spots of his stock or organization.

The customer who discovers a flaw in the merchandise he has bought but never returns to give the merchant a chance to make it good, is the real source of trouble.

That kind of customer not only stops his own buying at the store, but he usually relates his grievance to his friends, and they are influenced against the merchant as a result.

Whenever a man has a genuine cause for dissatisfaction and returns to tell his troubles to the merchant who sold the goods, he is rendering the retailer a very valuable service, and he should be treated accordingly.

Coming Conventions

National Hardware Association Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 17, 18, 19, and 20, 1922. T. James Fernley, secretary-treasurer, 505 Arch Street, Philadelphia, Pennsylvania.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 18, 19 and 20, 1922. F. D. Mitchell, secretary-treasurer, 1819 Broadway, New York City.

Western Implement, Vehicle and Hardware Association, Kansas City, Missouri, January 16, 17, 18 and 19, 1923. H. J. Hodge, Secretary, Abilene, Kansas.

Texas Hardware and Implement Association, Dallas, Texas, January 23, 24 and 25, 1923. A. M. Cox, Secretary, 822 Dallas County Bank Building, Dallas, Texas.

West Virginia Hardware Association Convention and Exhibition, Huntington, West Virginia, January 30 and 31, and February 1, 1923. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Indiana Retail Hardware Association Convention and Exhibition, Indianapolis, Indiana, January 30 and February 1 and 2, 1923. G. F. Sheely, Secretary, Argos, Indiana.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, February 6, 7, 8, 9, 1923. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids. A. J. Scott, Secretary, Marine City, Michigan.

Wisconsin Retail Hardware Association, Milwaukee Auditorium, Milwaukee, Wisconsin, February 7, 8 and 9, 1923. P. J. Jacobs, Secretary-Treasurer, Stevens Point, Wisconsin.

Pennsylvania and Atlantic Seaboard Hardware Association Convention and Exhibition, Philadelphia Commercial Museum, Philadelphia, Pennsylvania, February 12, 13, 14, 15 and 16, 1923. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh, Pennsylvania.

Ohio Hardware Association Convention and Exhibition, Cleveland, Ohio, February 13, 14, 15 and 16, 1923. Exhibition in the new Municipal Hall. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Illinois Retail Hardware Association Convention and Exhibition, Hotel Sherman, Chicago, Illinois, February 13, 14 and 15, 1923. L. D. Nish, Secretary-Treasurer, Elgin, Illinois.

Iowa Retail Hardware Association Convention and Exhibition, Des Moines, Iowa, February 13, 14, 15 and 16, 1923. A. R. Sale, Secretary, Mason City, Iowa.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, Massachusetts, February 21, 22 and 23, 1923. George A. Fiel, Secretary, 10 High Street, Boston, Massachusetts.

New York State Retail Hardware Association Convention and Exposition, Rochester, New York, February 20, 21, 22 and 23, 1923. Headquarters, Powers Hotel. Sessions and Exposition at Exposition Park. John B. Foley, Secretary, City Bank Building, Syracuse, New York.

Retail Hardware Doings

Illinois.

Jacob Decker of Hooperstown sold his entire stock of hardware to Luther E. Alkire.

Indiana.

George Barrington, of Bluffton, purchased the Poneto Hardware from the Sugg Brothers.

Iowa.

Charles E. Yarnell, formerly of Beason, has just bought an interest in the Vanderwilt Brothers Hardware store at Knoxville, Iowa. The new firm will be known as Vanderwilt and Yarnell.

Nebraska.

The entire stock of the Hargleroad Hardware store of Wilcox was destroyed by fire.

Ohio.

F. W. Coon, of Sabina, has disposed of his store to F. E. Light.

Texas.

The Fechner Hardware Company of Temple has sold its stock of goods to John Van Wagner at Pleasanton, Texas.

Wisconsin.

C. C. Kelleher of Phillips sold his hardware business to Rudolph I. Baumann and Frank X. Leuschen of Marathon City, Wisconsin.

Stock of the Elkhorn Hardware Company of Elkhorn was damaged by fire.

H. L. Jackson of Appleton has sold his interest in the Outagamie Hardware Company to his partner, Henry Rosmeissel.

Study and Interpretation of Advertisements.

You Can Make Your Advertisements More Gainful by Avoiding the Faults and Profiting by the Good Qualities of Others.

Times change and we change with them.

A generation or two ago the parlor was a sacred room furnished with horse hair sofas and stiff back chairs.

In one corner of the room was a what-not with an atrocious selection of sea shells and other ugly bric-a-brac.

When Mary's beau came to see her, he was solemnly conducted into this chamber of horrors with almost as much ceremony as if he was taking the ninety-second degree in some lodge.

They use to call that sort of a thing a home—but it was more of a dungeon.

Today homes are bright and cheerful places.

A whole profession has grown up with the development of the joyous home and we have today plans for the home beautiful.

Color harmonies, lighting—all are designed with a view of making the home more desirable, cheerful, and cozy.

Department stores, furniture houses and paint shops reap a steady harvest of profits from an exploitation of this tendency towards beautifying the home.

A good example of this appeal is shown in the advertisement of Williams-Counsell Hardware Company reproduced from the *Waukesha Freeman*, Waukesha, Wisconsin.

The phrase, "Better Homes Week," concentrates in a single line the force of the appeal to the modern spirit.

Every one wants a better home.

People are always planning improvements, new curtains, different wall paper, new lighting fixtures, etc., etc.

So, when the Williams-Counsell Hardware Company says in this advertisement "Re-Hardware Your Homes Now" it reaches the desires, wishes and ambitions of hundreds of its customers with the least amount of friction.

You don't have to argue with people about the desirability of better homes.

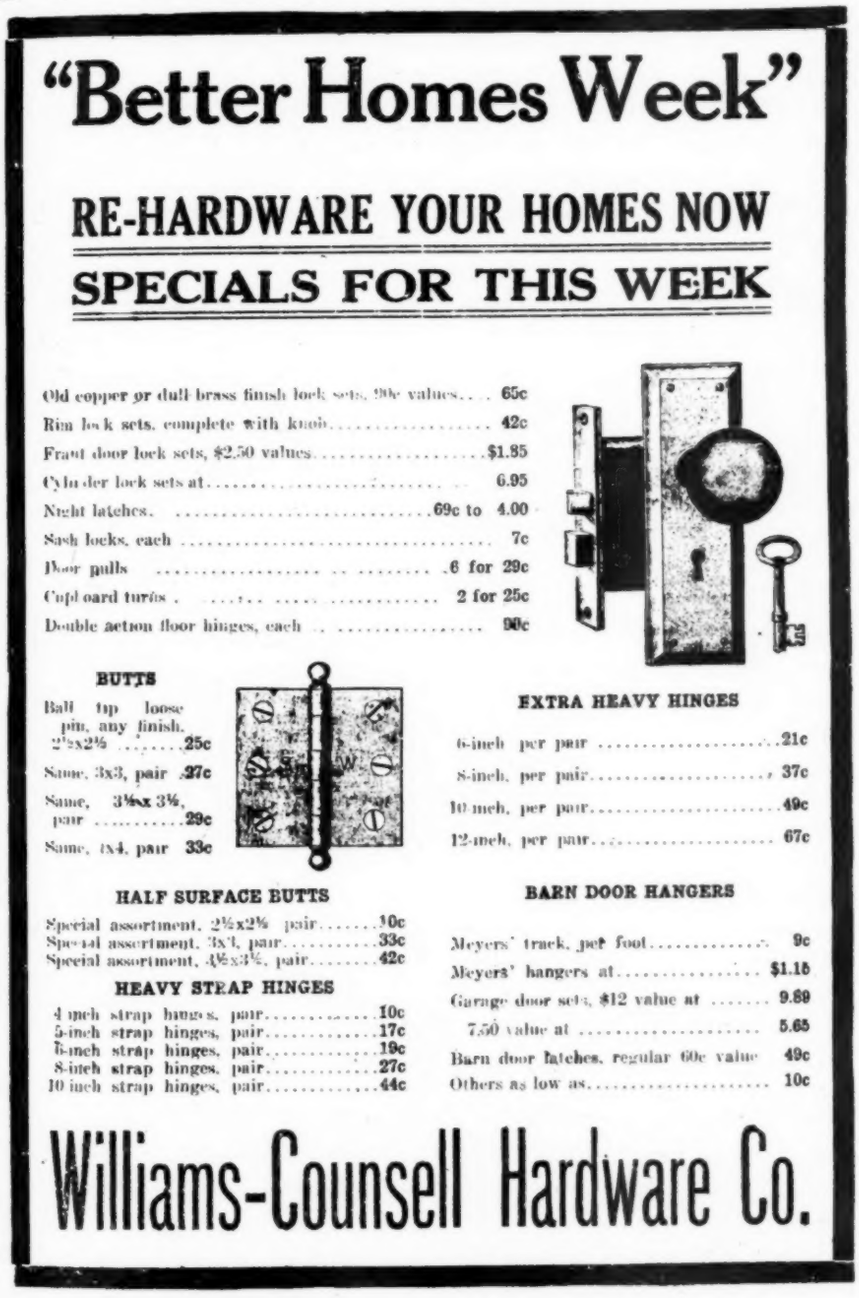
Customers are in a mood for the idea of re-hardware.

Other hardware retailers would do well to follow this good example.

Any week of the year is a good "Better Homes Week."

You don't have to depend on any particular season.

Get this spirit into your advertisements—it is the spirit of service, beauty and friendliness.



Use your mind as a storehouse, but not as a junkhouse.

* * *

Never judge a man's character by the quality of his hat.

Disinterested Expert Analyzes a Warm Air Heater for Burning Soft Coal and Describes Essential Features.

The Burning Test Made Was Unusually Exacting Because a Very Smoky Illinois Coal Was Used and a High Degree of Combustion Obtained.

Written especially for AMERICAN ARTISAN AND HARDWARE RECORD by
James S. Stevens, Hartford, Connecticut.

IN looking over various furnaces, our attention was attracted by a heater, especially designed for burning soft coal, which had been on the market for a great many years and which had certain features differentiating it from the usual types.

Some of these were as follows:

First, the welded steel construction.

This furnace has been on the market long enough to demonstrate the steel type as worthy the earnest consideration of furnace users.

Locomotive boilers are made of steel, and their furnaces of boiler plate give long and satisfactory service.

Because the use of this material for house heating furnaces is uncommon in the east, some may question the lasting quality of a steel furnace.

The answer to this is that the furnace has been on the market for about thirty-five years.

One of the dealers who specializes in this furnace told me that in their entire experience, they had taken out only nine Weir furnaces and most of these were taken out to replace them with larger furnaces of the same type.

This should answer the question of the long life of the furnace.

In a locomotive fire box, the shell of the furnace is protected by fire brick.

In the Weir furnace, when used for anthracite, the shell is similarly protected.

When used for soft coal, the Weir fire pot is used.

This consists of a heavy cast-iron fire pot, the rims of which are flanged to fit inside of the furnace cylinder.

Between the fire pot and the shell of the furnace, there is a continuous air space.

This air space is divided by fins, causing the air draft to pass twice around, between the fire pot and the furnace shell, become heated by the hot fire pot, the hot air mixing with gases rising from the burning coal, causing these gases to be consumed, promoting smokeless combustion of the coal.

For such purpose hot air is superior to cold air.

The port in the front of the furnace through which this air enters is constantly open, and the flow of air controlled by the check draft on the back of the furnace.

If the check draft is closed to increase draft and boost the fire, the flow of air is increased, to meet the increased production of gas from the coal.

If the check draft is opened, the draft is impeded and the flow of air through the front port is thereby reduced.

I am informed by the makers that this control is sufficiently complete to prevent excess air entering the fire at times when it is not needed.

The construction of this fire pot is very ingenious, and in the burning test I witnessed, where very smoky Illinois coal was burned, having about 32 per cent volatile or gassy content, at each hole around the rim of the fire pot a blue flame 3 inches long was to be observed, showing that the oxygen coming in around the fire pot was mixing with the carbon gases and smoke formed by the fire, and consuming them.

The top of the chimney showed that the combustion of the smoke was good, while the temperature of the waste gases in the smoke stack showed excess heat was not being wasted through the smoke stack, but was being delivered by the radiating surfaces of the furnace.

The Meyer people place in the door of this furnace a small square of mica, through which the process of combustion may be observed.

The port through which the gases of combustion pass out of the furnace shell is a large one.

It is not situated at the top of the furnace, but placed sufficiently low not to interfere with proper mixing of the gases in the furnace, or divert them at their point of greatest heat.

These gases pass through a cast collar into a crescent-shaped steel radiator back of the furnace.

This is a large section of somewhat thinner material than the shell of the furnace, and as the gases enter this radiator, they pass down and are deflected to right and left by a baffle sheet inside of the radiator.

The gases rise under this baffle sheet, and pass out the smoke pipe through a riveted casting, which contains not only the smoke pipe but the clean-out openings and a check draft on either side.

During the burning test of this furnace, it was evident the steel construction gave it a tremendous radiating ability.

Steel radiates heat more quickly than iron castings, and I found this furnace an excellent heat radiator.

An important point in all furnaces is the water pan to moisten sufficiently the warm air, as warm air properly moistened is more healthful than dry air.

Properly to moisten this warm air is a problem, one recently receiving more generally the attention it merits.

When a water pan of moderate size is placed on the floor between the casing and the furnace, a certain amount of moistening will take place, but the water will be heated quicker, and the air moistened more efficiently, if the pan is placed up in the warm air chamber.

The Meyer people have the water pan in the front of the furnace above the fire door.

There is sufficient space between the water pan and the front of the furnace to allow proper circulation of air, so the furnace shell will not be weakened, by excess heat, and yet sufficiently high that water may be warmed and absorbed by the warm air.

This point may be considered well covered.

The joints of this furnace are electrically welded. The dome being of heavier material than the sides, such connections as are necessarily of cast iron, are riveted.

The back radiator is so hung and supported by legs underneath as to remove most of the pull of its weight from the shell of the furnace.

We found the furnace began to radiate heat with very. little fire, that it was possible to make fire quickly, that after building the fire, the combustion seemed to be smokeless, and that it was a great heat producer.

The fact that it burned very smoky coal successfully showed it had been carefully designed, and its long record in the market has proven beyond doubt its practicability.

The construction of the fire pot tends to burn coal around the edges more quickly than in the center, making heat near the radiating surfaces.

As stated above, the Meyer Furnace Company provide a brick lined fire pot where it is to be used for burning anthracite coal.

The expense of this is inconsiderable, and gives the furnace a wide range of adaptability for hard or soft coals.

Freedom from gas leaks is an excellent point which can not be too strongly emphasized, and if there should exist any prejudice against a steel heater as such, I believe a careful inspection of this furnace would satisfy the exacting of its dependability and long life.

Many eastern people have felt they were solely dependent upon anthracite coal for heating their houses.

This furnace proves conclusively that no such feeling need be entertained by any one, and the owner of a furnace of this type may not only feel safe from the high prices caused by the limited supply of anthracite, but he can heat with anthracite coal, or with the bituminous and semi-bituminous and even semi-gas coals, which exist in much greater quantity and sell at less cost.

He can thus not only buy his coal cheaper, but avail himself of the greater heat units in the higher grades of soft coal, and develop economy.

To those interested in house heating from the standpoint of efficiency and economy, I suggest a careful investigation of the merits of this furnace, the cost of which is reasonable, and the workmanship excellent.

The plan and construction tend to adapt it to such coals as are commonly carried by dealers through the country, and the makers, confident of what the furnace will do, offer certain guaranties which appeal to the householder.

Getting Better Jobs Is Better Than Underbidding.

Sometimes, in our eagerness for more business, we are likely to overlook motives and purposes.

That is why it is good for us all to read the subjoined text from *Fitting Remarks,* the brightly edited house organ of the W. E. Lamneck Company, Columbus, Ohio:

Since business began there have been two schools of practice in the matter of carrying on their affairs. The Underbidders are one, the Believers in the Better Job, the other.

The Underbidders are the short-sighted brethren. The Believers in the Better Job are the far-sighted ones.

The Underbidders found their actions on a system of logic which makes them believe that getting the contract is the main thing, and that profit and satisfaction are secondary.

The Believers in the Better Job have an entirely different view.

They reason that one job with fair profit and lasting satisfaction is worth a dozen of the other kind.

The Underbidders are dazzled by the prospect of much activity.

We admit there is much to charm in this, but not if that activity is so great that ample justice can not be given to each job.

The Underbidder knows that the general public snaps at price like an hungry bass.

The Underbidder knows that the average man is fascinated by a low figure, and immediately jumps to the conclusion that the Underbidder is his friend and that all others are pirates and robbers, bent on taking his hard-earned cash and not giving value in return.

To bring things down to the furnace business, it is the matter of months before the Average Man awakens to the shoddy, sloppy work given to him by the Underbidder.

Then a rage sets itself up in his mind.

There usually is no set direction to his anger.

As example, it may direct itself against the entire system of warm air heating to the detriment and injury to the Believers in the Better Job.

To the Underbidder, there is the thought of great profits which come from quantity—he lets quality go by the board.

He can not realize that a succession of poor jobs, skimped because he can not afford to give proper time or use proper materials because of his low profit margin, are the worst of shifting sands upon which to build a business.

The recent period of depression which gripped the country has been the means of bringing many of the

Underbidders into existence.

They looked to low price to whet the appetite of lagging business.

For a little time the Underbidders may prosper, but for the man who is building a business which will bring him returns for the years to come, to the man who is seeking to establish a house which will be known for satisfaction and fair dealing, to the man who looks forward to the time when his grandchildren will receive the heritage of a sound business and community respect, to this far-sighted man, the policy of the Underbidder does not appeal.

He desires permanence and healthy growth and has the foresight to see that there is but one way to attain this end, and that is by giving satisfaction first, and then to realize a fair profit on each job.

As Lincoln said: "You can't fool all of the people all of the time," and after a while even the Average Man awakes and sees the advantage of dealing with the brotherhood of Believers in the Better Job.

The only sad thing is the annual crop of the Underbidders which crop up and flourish like weeds for a short time, but the general public must be educated and shown the folly of dealing with this class, and this is a task which falls on the shoulders of the Believers in the Better Job.

Join the Believers in the Better Job.—It pays in the long run.

New Wall Seat Is Inexpensive Heating Device.

The Hart & Cooley Company, Incorporated, of New Britain, Connecticut, has just issued an attractive folder describing H. & C. Wall Seats; a simple inexpensive heating device which should prove very popular for the small city home, the ranch house, farm house, and stores and offices crowded for space.

The Wall Seat is a two-partition (one side for warm air outlet, the other side for cold air intake wrought steel register; 18 inches high; 14 inches to 20 inches wide; 35 to 67 inches long.

It is ideal for a small basement with a small furnace. All the heat from the furnace is used and circulated more evenly, which makes it economical.

If the entire house can not be heated by one Wall Seat placed in the hallway to allow circulation of heat upstairs as well as down stairs, one or more additional pipes may be run to the other rooms.

It may be easily installed in a new house, or in a house already built, without tearing into the walls.

A hole is cut in the floor next to the wall; the wall seat placed over it; the boot connected up under it to the furnace; the installation is complete.

These Wall Seats may be used with any make of warm air furnace. They used a standard boot which the Hart & Cooley Company can supply, if so desired.

This heating fixture may also be used as a hall seat, a low stand for lamp, card tray, case, or a base for a bookcase.

In this way it blends into the general plan of the room and becomes inconspicuous.

It can be furnished in grained oak or mahogany, with or without leather top, and so it may harmonize with the general finish and woodwork of the room.

It may also be used for the crowded store or office. Placed beneath a counter, or used as a low stand or table, or a base for a counter.

It does not take valuable floor space. Likewise in a busy office, the Wall Seat may be used as a chair against the wall, or a base for books.

This makes the heating feature into a useful piece of furniture.

This folder has eight pages (folded 3½x6 inches) containing four illustrations, two of which are sketches of the Wall Seat attached to the boot.

Copies of the folder may be obtained by writing to the Hart & Cooley Company, New Britain, Connecticut.

The New Hart & Cooley Wall Seat.

It is impossible to defeat an ignorant man in an argument.

* * *

Most men would save a lot of money by letting others do the speculating.

* * *

Did it ever occur to you that the bright side of things is very likely to be the right side?

Practical Helps and Patterns for the Tinsmith.

Aids to the Improvement of Craftsmanship and Business. News from Various Branches of the Sheet Metal Trade.

PATTERNS FOR CHUTES.

Now and then chutes are placed in pipes for throwing down refuse and other material in place of other means.

In such cases the design similar to one shown here can be used.

The first step is to detail the side elevation, making the pipe to the required diameter, and then detail the hopper as a-A-B-1′.

view of hopper and then describe the half circle and divide in the same number of equal parts as the section.

Draw lines to the corner B and you have the working drawing finished.

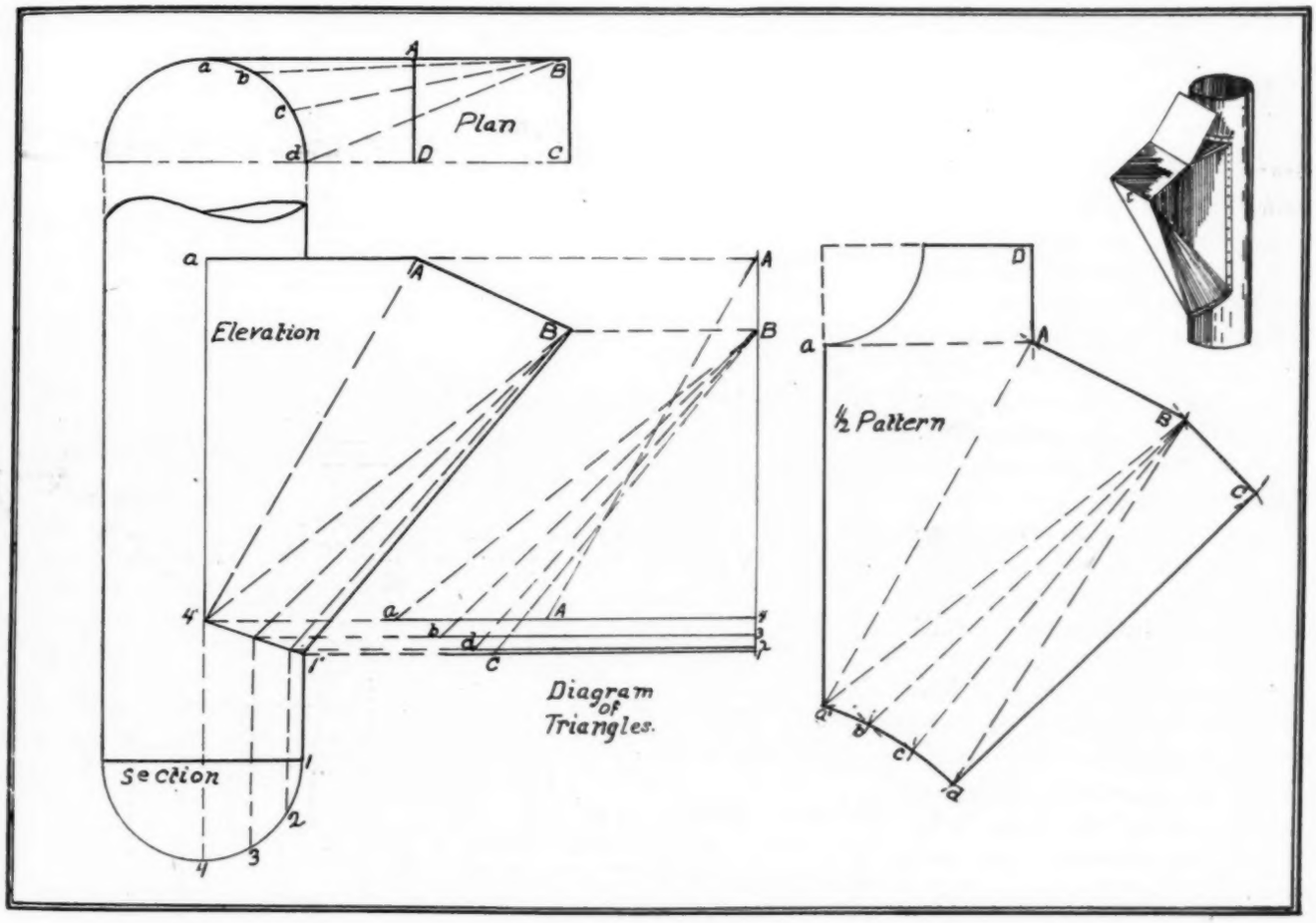
To set out the true lengths, draw any line as 1-A in diagram. Then from points A and B, also each point in miter line 4′-1′ bring over you have the true length as shown.

To set out the pattern draw any line as a-a′ in pattern equal to a-4′ of elevation.

Then pick the line a-A from elevation and from a in pattern describe the arc A.

After this pick true length A-A from diagram and using a′ as center cross arcs in A of pattern.

Then pick the width of hopper



Patterns for Chutes.

The angle made by B-1′-1 is bisected, thereby establishing point 4′.

Next we describe the half section and divide in equal parts and then draw lines to this miter line.

After which, we draw lines to the corner B.

Next draw a plan by erecting lines from A and B of elevation so as to produce the foreshortened horizontal lines to this vertical line in diagram.

With dividers pick the triangular lines from plan as B-a; B-b; B-c; and B-d and set in diagram as 4-a; 3-b; 2-c and 1-b.

Also pick plan lines A-a and set in diagram as 4-a and draw lines to the elevation A.

All the other lines draw to B and A-B of elevation and using A in pattern as center, strike arc as at B. Then pick true length a-B and using a′ in pattern as center, cross arcs in point B.

Now pick a girth space as 1-2 from section, spanning the dividers a fraction larger and describe arc b in pattern.

Pick true length B-b and using B

in pattern as center, cross arcs in point b.

Continue in this way until point d is established.

Then pick half the length in plan as B-C and, using D in pattern as center, strike arcs as at C.

Now pick the elevation line B′ and, using d in pattern as center, cross arcs in point C.

Join lines through all points where arcs cross and the pattern is finished.

To add the top A-D-a the top of plan is just simply reproduced.

To this edges must be allowed for riveting and enclosing a wire.

If a lid is placed over the opening of hopper, this can easily be provided for, by one of several different plans.

Grand Rapids Sheet Metal Folk Enjoy Annual Outing.

According to a report of the event by Frank E. Ederle, secretary Michigan Sheet Metal and Roofing Contractors' Association, the annual outing of the Grand Rapids Sheet Metal and Heating Engineers was a delightful affair.

It was held Saturday, August 12th, at Bostwick lake.

About fifty people including the wives and families attended.

Following a splendid chicken dinner the members entertained themselves with a ball game.

There being no official scorekeeper we are unable to give the score or winner.

After the game nearly all present went in bathing, this being quite necessary as the day was very warm.

While the men were in bathing ten ladies had a real tug of war.

The team captained by Mrs. Lamoreaux won over the team in charge of Mrs. Oole.

The prize for this event was ice cream in which the losers also participated.

After this came the drawing contest in which twenty-four prizes were distributed to the ladies.

Each lady received a prize which consisted of packages of groceries.

To determine the most popular lady and gentleman a voting contest was arranged and Mrs. F. E. Ederle won the ladies' prize while Doc Weatherly secured the gentlemen's prize.

Altogether the affair was very successful and much enjoyed by all.

Harry Rhodes had charge of all arrangements while Vic Heather conducted the drawing contest.

Sheet Metal Craftsman Describes a Case of Very Unusual Gutter Construction.

Examples of This Sort Are Helpful Because They Show the Necessity of Using Intelligence as Well as Tools.

Written especially for AMERICAN ARTISAN AND HARDWARE RECORD by L. S. Bonbrake, Peoria, Illinois.

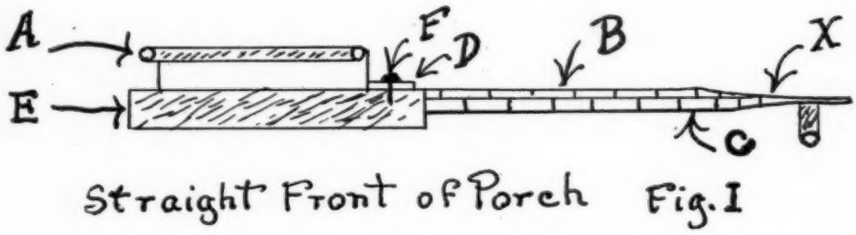
SOME peculiar and ridiculous situations will "pop up" for solution by a workman in almost any one of the building trades.

Driving nine miles into the country in Mason County, Illinois, to relay a cornice gutter with tin, we found the old tin cleaned out, a *new shingle roof laid,* and all ready (?) for my work.

Another occurred in Cass County —same state—where I was directed to go to a small town and lay a porch roof.

The front corner of the porch was made circular, and below the tin roof, pine shingles were used to close in the top end of the porch probably two feet or more from the roof down.

When arriving on the job, I found a carpenter sawing across a beveled bottom three-inch pine board, at intervals of about half an inch, which



Straight Front of Porch Fig. I

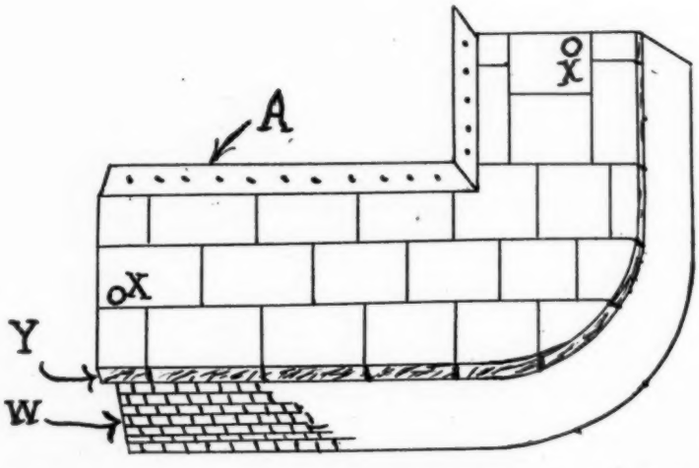


Figure 1.—C.—One-inch Pine Sheeting; B.—Two courses of shingles, butts out; E.—Tin roof formed down over B. and E.; X.—Gutter formed by taper of shingles; A.—Tin Beaded extension; F.—Nailing the extension A.; D.—Tin to form over the nail heads F.

Figure 2.—A.—Tin flash against the house; X. X.—Water outlets; W.—Shingle apron enclosing porch top; Y.—Tin roof formed down, flashing apron W.

was intended to allow the board to circle around the corner upon the shingles and form a "V" shaped gutter.

However, he was having indifferent success and asked if there was not some other way of taking care of the water.

As the sheeting was already laid with no provision made for keeping the water from flowing over the eave, yet, fortunately having a two-way pitch from the center, the water could be handled nicely with leaders from the outlets.

The idea of a water channel as shown by the illustration, Fig. 1, was conceived, adopted and after twelve years of service, in withstanding the extreme changes of this climate, it has not split, has no leaky seams and the tin is sound from the fact that no square turns were formed to construct a deep gutter to hold ice, soot and sediment destructive to the tin and seams.

In order to have a solid base for the tin to lay upon, and at the same time direct the water back from the eave, it was suggested that two rows of shingles be laid, one upon the other with their butts flush with the eave edge (see Fig. 1).

The flat seamed tin roof was laid in the usual manner, except it was extended over the eave a sufficient distance to allow of its being malleted down over the butts of the shingles, the sheeting board, and secured by nailing into the latter.

After the roof was laid, a beaded extension sash was nailed over the tin to flush the eave.

This extension is made in the shop by cutting the required number of strips to run the eave, 2½ or 3 inches wide, according to the height wanted.

The nailing flange is formed at a right angle ½ inch, the bead will take up ¾ in. more stock, hence if the strips are cut 2½ inches, the top of the extension will stand slightly more than 1¼ in. high, a good height for an ordinary porch.

The extension is nailed through the ½ inch flange back of the bead and should be nailed close.

The back edge of this flange is formed up and over the nail heads, hammered smooth and tight, forming a "blind nail" to be soldered over, completing the flash.

Laying the tin roof over the corner circle is merely a continuation of the main roof, with due observance that the tin projects over the edge of the circle at all points, far enough to cover the shingle butts, and the sheeting board edge.

This tin is sheared to a true circular line, which can be taken from some piece sawed from the circular sheeting and enlarged in radius to the width of the eave projection.

It is then snipped back to the shingles in about half-inch cuts when it can be malleted down and nailed as readily as if a straight edge.

Building a neat circle with the flash extension is somewhat more difficult, yet it can be done nicely by snipping the nailing flange, and use a small three-corner file to cut into the back of the bead at near one-inch intervals.

Use eave in binding the bead to the radius of the circle when nailing and a presentable front will have been obtained.

A feather-edged board can be used instead of shingles to give the taper when convenient, however the shingles answer every purpose, making a gutter unsurpassed for durability when the above method is carried out, and the tin is right.

Zinc Sheathing Can Be Used for Wall Covering.

A metal wall covering, made of very thin sheet zinc decorated with designs and enameled, reached this country from Germany the past week.

Thousands of tons of this metal covering are used annually in Germany and Austria in restaurants and other public places.

It does not chip, requires no painting, is rust proof, lighter in weight than galvanized iron and the various tilings generally used in this country for such purposes and is said to be more ornamental in design.

Then again it has another attractive feature—it costs considerably less than ceilings and wall coverings now used.

Several samples of this metal covering were received lately by Stephen S. Tuthill, secretary of the American Zinc Institute, with a view of introducing it in this country.

It is understood that several leading zinc interests will manufacture the metal wall covering and it was stated that the new product would be on the market in a few months.

Tin Plate Mill Will Use Fuel Oil to Offset Coal Shortage.

As a safeguard against coal shortage, N. & G. Taylor Company, manufacturers of tin plate, are arranging to extend the use of fuel oil to other parts of their plant at Cumberland, Maryland.

Oil is now being used in place of coal in the company's Open Hearth furnaces, and by running emergency pipe lines to other departments of the works the use of coal will be greatly reduced.

The company has a sufficient stock of coal on hand for full operation for a period of six weeks and the change of the major coal consuming units to the use of fuel oil will enable the plant to run for several months upon its present stock of coal.

No curtailment of operations has yet been necessary—all departments of the plant continuing to run full under a heavy demand for the company's products.

Purchases the Atlantic Sheet Metal Works.

The Atlantic Sheet Metal Works, Atlantic, Iowa, has been purchased by George W. Downs, an experienced business man and expert mechanic.

W. B. Collins, the former proprietor, was active in the Iowa Sheet Metal Contractors' Association and his successor has already been invited to join that progressive organization.

Greenberg Helps Jim Kelly Get a Piano for Alice by Changing Him from the Sandstone to the Marble Class.

Any Fool Can Obtain a Lot of Work at the Cheapest Price, but It Takes a Business Man to Land Orders That Bring the Right Profit.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Cleveland, Ohio.

JIM KELLY took me over to a house he was working on. It was a pretty home and has a pretty sandstone front.

I admired the home and chanced to remark to Jim that I wondered why the owner did not put a marble front on it.

I really did not mean it at all, but Jim took me seriously and replied:

"If he had put a marble front on that house it would cost more than the whole house was worth."

"I suppose so," I replied aimlessly.

This all happened on a Sunday afternoon and we were really just killing time.

After we returned to Jim's home we sat down on the porch and just talked about nothing in particular when a gentleman walked into the yard, approaching Jim, extended his hand and introduced himself as a Mr. Snyder, a piano salesman.

"Mr. Kelly," he said. "You will pardon me for taking the liberty of calling on you on Sunday, but I have tried to see you all week without success. I just live around the corner, and seeing that you were in, I thought I would just mention the fact that I would like to show you that piano that your daughter is anxious to have."

"There won't be any use in it," Jim replied. "I am not in the market for a piano. While I know that Alice wants one, yet I can not think about it at this time."

Mr. Snyder was a clever salesman, and read between the lines. He knew that Jim could not afford a piano from what Jim said, and again apologizing he left us.

"Gee!" Jim said to me, "I wish I could get Alice that piano. Wednesday is her birthday and I feel like thirty cents about not letting her have it—but what can I do?"

"Can't afford it, hey?" I asked carelessly.

"That is just it," Jim admitted.

"Jim, I am not at all surprised," I said. "I am sorry for you and for Alice. You should be able to afford that piano. I am not criticizing you at all, but it seems a shame that you must turn her down just because you can not afford it."

"This sheet metal business," Jim explained defensively, "is not the kind that will permit the buying of pianos. I am working day and night and all I get is a living; leave alone pianos."

"Jim," I said, "don't get sore if I shoot a little good sense into your head. You are not faithful to yourself. You do not take yourself seriously enough. You have made up your mind that you can not afford a piano and you believe it. Make yourself have to afford it and you will have it."

"What is that you are trying to put over? You seem to think that all I have to do is to say I can afford it and then go get it," Jim said impatiently.

"No; not that exactly," I said quietly. "Let me tell you why I say this. I got an idea from that sandstone front at that house you showed me this afternoon. Remember I asked you why it was not marble and you said it would cost too much?"

"Yes, I remember that. What has that to do with a piano?" Jim asked.

"Plenty," I replied. "You are a sandstone business man. If you were of the marble variety you would have that piano."

Jim just looked at me and wondered.

"Do you know why sandstone is cheaper than marble, Jim?" I asked.

"Sure I do," Jim answered. "Marble is more expensive."

"No that is not the reason, Jim," I explained. "The reason sandstone is cheap is because it is soft and will not take a polish. Marble is dear because it is hard and will take a high polish."

"What has that to do with a piano?" Jim asked again.

"Here is where you come in, Jim," I said. "You as a sandstone business man are soft and can not take a polish. I mean the polish of business. As a polished business man, you should know that there are three profits in business.

"They are the profits that you can earn on buying, selling and banking. If you will just make up your mind that you are a marble variety and get that polish you will be able to get a piano for Alice.

"Jim, I am not criticizing you. I am just telling you all that a friend should tell. I want to put you right with yourself. You are as soft as sandstone. You are not hard enough to stand by a price that will enable you to discount your bills.

"You pay interest instead," I continued. "Paying interest makes your goods cost you six per cent more than it is worth, and you must borrow money at six per cent which makes it twelve per cent, and you can not bank any money which robs you of four per cent more. Right here you see sixteen per cent going blooey. This happens several times each year and you are multiplying your poverty."

Jim looked up at me with a wild stare in his eyes.

He seemed dumb-founded.

It sounded like a funeral to him.

"How do you know I have to borrow money?" he asked in a puzzled tone.

"I know it, Jim, because you can not afford to buy that piano," I answered. "If you had the money you would buy it at once because you as a father would go to any extreme to please your child. It is natural of any father to want to please his child."

"How does a fellow get that marble polish you speak of?" Jim asked.

"By breaking a bad habit you have, Jim," I replied. "You are selling your knowledge too cheaply. You are not working in a business manner. You are feeding the wolf the money it takes to buy that piano, and by the wolf I mean your overhead.

"You do not know how big your overhead is," I explained, "and not knowing that, means that you do not know how much the wolf eats, so you can make the customer allow the price it takes to feed him Any fool can get a lot of work at the cheapest price. It does not take brains to sell something for nothing.

"To get the polish," I continued, "read the books that AMERICAN ARTISAN AND HARDWARE RECORD advertises and learn what business really is. In doing this, you will acquire a polish like marble. It will be a three-coat polish.

"Buying is one coat, selling is the second coat, and banking is the third coat. They have such books from which you can get great business knowledge.

"Get out of the sandstone stage and become a marble variety and get some business polish into your head. You will never get only that which you attract.

"If you attract business ideas you will become a good buyer, a good seller, and a good banking business man. When you have reached that stage, you will have a piano for Alice."

"Thank you, friend," Jim said with a determined look in his eyes. "You are right."

At this point, Alice announced that supper was ready.

We entered the house, sat down, and Alice asked:

"Daddy, who was that man who talked to you a little while ago?"

"That," Jim replied without batting an eye, "is Mr. Snyder, the piano man, and I told him to bring your piano tomorrow."

Jim will make good, too. Just keep your eye on him.

New Jersey Zinc Company Plans Display at Chemical Exposition.

Panels painted with coatings made of zinc oxide and "Albalith" will be among the features of The New Jersey Zinc Company display at the coming Chemical Exposition to be held in New York the second week in September.

The exhibit will also be headquarters for the Mineral Point Zinc Company and The New Jersey Zinc Sales Company.

Specimens of products made by the Zinc Company will be on exhibition as well as commodities into which they enter as raw materials.

This year, again, the "flow sheet" which has characterized former zinc displays will be a prominent part of the exhibit.

Zinc leaders, gutters and other roof fittings will be shown.

Mr. W. H. Hendricks, General Sales Engineer, will be in charge. He will be assisted by Messrs. S. T. Ballinger, V. A. Belcher, E. W. Boughton, C. A. Smith, A. E. Mervine, S. C. Reynolds, C. D. Brothers, H. W. Henderson, W. J. Keuhn and by other sales representatives.

Zideck Will Resume Articles on Radiator Repairing.

After a refreshing vacation, E. E. Zideck, New York City, will resume his articles on radiator repairing in AMERICAN ARTISAN AND HARDWARE RECORD, beginning next week.

Most men would rather have half a loaf than no chances to loaf.

* * *

If you would know a man study his infirmities rather than his virtues.

Notes and Queries

Warehouse Truck Wheels.

From Reiche Brothers, 18 Main Street, Naperville, Illinois.

Kindly inform us where we can purchase Hard Rubber Warehouse Truck Wheels.

Ans.—Lansing Company, 1535 South State Street, Chicago, Illinois; The George P. Clark Company, Windsor Locks, Connecticut.

Water Motors.

From F. W. MacDonald, 626 North Winnebago Street, Rockford, Illinois.

Kindly send me the names and addresses of some firms manufacturing water motors.

Ans.—George G. Roberts Company, Dayton, Ohio; American Water Motor Company, Columbus, Ohio.

Mesh Wire Netting.

From H. H. Christensen, Ceylon, Minnesota.

Kindly advise me where I can buy one-inch square Mesh Wire Netting.

Ans.—Chicago Wire Iron & Brass Works, 2411 Belmont Avenue, Chicago, Illinois.

Address of the Kelsey Heating Company.

From George Gundling, 1116 North Wells Street, Chicago, Illinois.

Kindly give me the address of the Kelsey Heating Company.

Ans.—Kelsey Heating Company, Syracuse, New York.

Boat Patterns.

From J. F. Moser, Pierceton, Indiana.

Where can I buy flat bottom boat patterns?

Ans.—H. F. Thompson Boat and Pattern Works, Decorah, Iowa.

Metal Weather Strips.

From Fred L. Michaels, Arcadia, Indiana.

Will you kindly inform me where I can get metal weather strips for windows?

Ans.—All Metal Weatherstrip Company, 126 West Kinzie Street; Chicago Metal Weather Strip Company, 1617 North Troy; Robbins Manufacturing Company, 1815 North Central Park Avenue; all of Chicago, Illinois, and American Metal Weatherstrip Company, Grand Rapids, Michigan.

Review of Conditions in the Metal Markets.

General Situation in the Steel Industry. Report of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

FIRMER TONE MARKS COPPER TRADE.

The copper market is characterized this week by a firmer tone.

Electrolytic is still available at 14 cents delivered for August, September and October shipment, although some producers are asking slightly higher prices even for nearby delivery.

There is a moderate demand from domestic consumers and a fair volume of business is still being done for export mainly through European agents at 14.20 cents to 14.25 cents, cost, insurance, and freight European points equivalent to 14 cents to 14.05 cents free aboard steamer New York.

The most important feature continues to be evidence of large domestic consumption, although the copper industry has suffered with all others as a result of coal shortage and impeded transportation.

Apparently, however, copper manufacturers have suffered less than the iron and steel industry.

The outlook is now encouraging for resumption of coal mining and the settlement of the railroad labor difficulties is only a question of time.

It will be many months, however, before the losses incidental to the labor strikes are recovered, if ever.

Strikes are like war in their destructive influences.

A better demand for copper is evident in the outside market and more copper is available from second hands, but at prices little, if any, below those asked by producers.

Electrolytic is still held at 14 cents refinery for prompt, September and October shipment, but this price could be shaded on a few small lots for early shipment.

Lake copper is steady at 14⅛ cents delivered for August and September shipment and casting copper is steady at 13.45 cents f. o. b. refinery.

There are few, if any, sellers of copper here for export at 14 cents free aboard steamer, although some business is reported to have been done a shade less.

Brass and copper products continue firm. Mill representatives report fair orders taken recently except for brass rods and brazed tubes.

Some mills, with orders booked close to capacity for four months, are not seeking business.

Tin.

Prices of tin went up about ⅛ cent during the early part of the week.

A feature of the market was the heavy arrivals, amounting to over 700 tons and coming on five ships.

This was a record arrival for some little time.

Tin plate makers continue out of the market and the chief buying is on the part of dealers.

In a general way, tin is working itself into a sound position, the only fly in the ointment being the big stocks still held in the East by the Governments concerned, though no special anxiety need be felt on this score.

The market remains largely professional, but no doubt outside interest will develop when a higher level is reached.

Meanwhile the pace has been too fast.

Lead.

The broad buying movement in lead which has been in progress for over two weeks has taken up much metal for September as well as August shipment, some producers being practically sold up to October.

One or two producers have continued to take care of preferred customers at 5.75 cents New York, the official price of the leading interest, but sales have been made in the outside market up to 5.90 cents New York.

Missouri lead has sold in large amounts at 5.55 cents, St. Louis.

It is estimated that consumption of lead is exceeding production by 10,000 tons monthly.

Solder.

Chicago warehouse prices on bar solder are as follows: Warranted 50-50, per 100 pounds, $22.25; Commercial 45-55, per 100 pounds, $20.75; and Plumbers' 40-60, per 100 pounds, $19.50.

Zinc.

Prices for zinc ore remained stationary at $36.00 to $37.50, but at these prices over 10,000 tons of ore were secured.

In every respect the market was under pressure and it was surprising that so large a tonnage was marketed.

Smelters report that ore purchases are very slow in reaching destination, and that they have large tonnages of stocks on cars in transit between the mining fields and the smelters.

The number of cars available for ore shipment are scarce, and until there is a settlement of the railroad strike it will be continuously more difficult for the district to operate.

The stocks of slab zinc were reduced 958 net tons in July, according to figures just released by the American Zinc Institute.

The amount on hand on July 1 was 29,576 tons and the amount on July 31 was 28,618 tons.

Production during the month was 31,917 tons and there was shipped during the month 32,875 tons.

The number of retorts operating at the end of the month was 54,909.

There was shipped for export during May 541 tons.

That stored for account of customers and not included in the stock on hand at the end of July was 1,132 tons.

The decrease in zinc stocks the preceding month had been 10,833 tons.

Sheets.

There is considerable buying pressure in galvanized sheets, consumers endeavoring to place spot and prompt orders while they are importuning mills for heavier deliveries.

In the sheet market as a whole the demand is relatively light, partly because it is so difficult to buy and partly because consumption of sheets is decreased at some points by the scarcity of coal.

The pressure for galvanized sheets is not due to the requirements being above the usual proportion to the total sheet demand, being due instead to production of galvanized sheets being particularly restricted, by reason of labor shortage at some plants and heavy operations at other plants in the manufacture of full finished sheets, this absorbing a large part of the pickling capacity.

The actual buying and selling market at the present time is from $2 to $7 a ton above the nominal or official prices.

Mills will be unable to accept much business for actual fourth quarter delivery when books are opened, the exact quantity depending on production between now and October 1st.

Production has been much lighter than was expected when orders were taken for third quarter, and unless production greatly increases, which is very improbable, the majority of mills would have to carry over considerable tonnage into the new quarter even without selling any more from now to October 1st.

There is a great deal of talk now about there being a general advance in the market above the nominal basis, and present appearances are that an advance is more likely than not to occur.

Such an advance would probably be made within two or three weeks, since the occasion would be the opening of order books for fourth quarter and that formality can hardly be delayed beyond the end of this month, the present quarter being half over already.

Tin Plate.

The tin plate market in general remains at $4.75, Pittsburgh base, but there is more shading of this price than a week or two ago.

Comment is being made in the trade on the facility with which the price is cut, considering that demand has been very fair while production is limited by physical conditions.

As demand is certain to be lighter later on in the year it seems somewhat improbable that it will be possible to set the market for the first half of next year at as high as $4.75.

Old Metals.

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: Old steel axles, $15.50 to $16.00; old iron axles, $21.50 to $22.00; steel springs, $15.50 to $16.00; No. 1 wrought iron, $13.00 to $13.50; No. 1 cast, $15.50 to $16.00, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 8½ cents; light brass, 4½ cents; lead, 4¼ cents; zinc, 2½ cents; and cast aluminum, 12 cents.

Pig Iron.

According to the report of the Matthew Addy Company, Cincinnati, Ohio, conditions in the pig iron trade are becoming more and more unsettled every day.

All over the country furnaces are either out of blast or are finding it necessary to bank on account of their inability to secure coke.

Stacks that had anticipated blowing in about this time have been unable to do so for the same reason.

Furnace stocks are decreasing in every direction and the comparatively few furnaces that have any iron on their yards are having a hard time in making shipments on account of embargoes and the short car supply.

Fuel Shortage and Traffic Difficulties Force Steel Mills to Suspend Operation.

Already Ten Thousand Men Have Been Thrown Out of Employment by the Closing Down of Steel Plants.

ABOUT three months ago nearly every day came an announcement of the reopening of some department of a steel mill after a year or more of idleness.

This was during the period of the coal strike, too.

Nowadays the announcements are the reverse.

Departments of mills are closing and men are being forced out of work because men in the coal and railroad industries see fit to strike.

The latest announcement is that pertaining to the closing of the rail and bar mills of the Edgar Thompson Steel Works at Braddock, Pennsylvania, throwing out of work 1,000 men.

About ten steel plants, employing a total of 10,000 men, have already closed down, besides the 40 blast furnaces that have banked since fuel troubles started.

The average supply of fuel is only enough for two weeks' operations.

Contrary to the general trend, one steel department is scheduled to resume operations this week, after several weeks of idleness.

That is a plate mill of the Brier Hill Steel Company, but this company will curtail sheet making because of the shortage of box cars and make plates which it can ship in open-top cars.

The present distress in the steel industry is caused by a combination of the two strikes, but the railroad trouble is much the more severe.

There is still coal aplenty, but it is not being transported rapidly enough to consumers.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.

Chicago Foundry..	$30 00
Southern Fdy. No. 2	26 00 to 27 00
Lake Sup. Char-coal	33 15
Malleable.....	30 00

FIRST QUALITY BRIGHT TIN PLATES.

			Per Box
IC	14x20	112 sheets	$10 00
IX	14x20.....		11 25
IXX	14x20.....		12 60
IXXX	14x20.....		13 90
IXXXX	14x20.....		15 25
IC	20x28.....		20 00
IX	20x28.....		22 50
IXX	20x28.....		25 20
IXXX	20x28.....		27 80
IXXXX	20x28.....		30 50

COKE PLATES.

Cokes, 180 lbs...		20x28	$11 80
Cokes, 200 lbs...		20x28	12 00
Cokes, 214 lbs...	IC	20x28	12 35
Cokes, 270 lbs...	IX	20x28	14 10

BLUE ANNEALED SHEETS.

Base .....per 100 lbs. $3 75

ONE PASS COLD ROLLED BLACK.

No. 18-20.....per	100 lbs.	$4 25
No. 22-24.....per	100 lbs.	4 30
No. 26.....per	100 lbs.	4 35
No. 27.....per	100 lbs.	4 40
No. 28.....per	100 lbs.	4 45
No. 29.....per	100 lbs.	4 55

GALVANIZED.

No. 16.....per	100 lbs.	$4 70
No. 18-20.....per	100 lbs.	4 85
No. 22-24.....per	100 lbs.	5 00
No. 26.....per	100 lbs.	5 15
No. 27.....per	100 lbs.	5 30
No. 28.....per	100 lbs.	5 45
No. 29.....per	100 lbs.	5 95

BAR SOLDER.

Warranted.
50-50 .....per 100 lbs. $22 25

Commercial.
45-55 .....per 100 lbs. 20 75
Plumbers .....per 100 lbs. 19 50

ZINC.

In Slabs 6 95

SHEET ZINC.

Cask lots, stock.....8¾c
Less than cask lots.....9¼c

COPPER.

Copper Sheets, base.....20¾c

LEAD.

American Pig 6 05
Bar 6 80

Sheet.
Full coils ....per 100 lbs. 9 00
Cut coils ....per 100 lbs. 9 25

TIN.

Pig Tin .....per lb. 35½c
Bar tin 37½c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR HEATER FITTINGS AND ACCESSORIES.

ADZES.

Coopers'.
Barton's .....Net
White's .....Net

AMMUNITION.

Shells, Loaded, Peters.
Loaded with Black Powder 18%
Loaded with Smokeless Powder 18%

Winchester.
Smokeless Repeater Grade .....20 & 4%
Smokeless Leader Grade .....20 & 4%
Black Powder .....20 & 4%

U. M. C.
Nitro Club .....20 & 4%
Arrow .....20 & 4%
New Club .....20 & 4%

Gun Wads—per 1000.
Winchester 7- 8 gauge 10&7½%
" 9-10 gauge 10&7½%
" 11-28 gauge 10&7½%

ASBESTOS.

Paper up to 1/16.....6c per lb.
Rollboard .....6¼c per lb.
Millboard 3/32 to ⅛....6c per lb.
Corrugated Paper (250 sq. ft. to roll).....$6.00 per roll

AUGERS

Boring Machine.....40&10%
Carpenter's Nut 50%

Hollow.
Bonney's.....per doz. $30 00

Post Hole.
Iwan's Post Hole and Well .....30 and 5%
Vaughan's, 4 to 9 in., without handles per doz. $14 00

AWLS.

Brad.
No. 3 Handled..per doz. $0 65
No. 1050 Handled " 1 40
Patent asst'd, 1 to 4 " 35

Harness.
Common .....per doz. $1 05
Patent ..... " 1 00

Peg.
Shouldered ..... " 1 60
Patented ..... " 75

Scratch.
No. IS, Socket Handled .....per doz. $2 50
No. 344 Goodell-Pratt, list less.....35-40%
No. 7 Stanley....per doz. $2 25

AXES.

First Quality, Single Bitted (unhandled), 3 to 4 lb., per doz.....$10 50
Good Quality, Single Bitted, same weight, per doz. 9 50

BALANCES, SPRING.

Universal.
Sight Spring.....List less 25%
Straight .....List less 25%

BARS, WRECKING.

V. & B. No. 12.....	$0 34
V. & B. No. 24.....	0 43
V. & B. No. 324.....	0 57
V. & B. No. 30.....	0 48
V. & B. No. 330.....	0 63

BEVEL, TEE.

Stanley's Rosewood handle, new list .....Nets
Stanley iron handle.....Nets

BINDING CLOTH.

Zinc 55%
Brass 40%
Brass, plated 60%

BITS.

Auger.
Jennings Pattern.....Net
Ford Car.....25% off
Ford's Ship.....25% off
Irwin 35%
Russell Jennings.....less 10%
Clark's Expansive.....33⅓%

Center 10%

Countersink.
American Snailhead..... 1 75
" Rose 2 00
" Flat 1 40

Dowel.
Russel Jennings .....plus 20%

Gimlet.
Standard Double Cut Gross $8 40
Nail Metal Single Cut .....Gross $4 00—$5 00

Reamer.
Standard Square....Doz. $2 50
American Octagon.. " 2 50

Screw Driver.
No. 1 Comomn.....Each 18c
No. 26 Stanley.....Each 70c

BLADES, SAW.

Wood.
Atkins 30-in.

Nos.	6	40	26
.....	$8 90	$9 45	$5 40

Diston 30-in.

Nos.	6	66	26
.....	$9 45	$10 05	$9 45

BLOCKS.

Wooden 20%
Patent 20%

BLOW TORCHES (See Firepots).

BOARDS.

Stove.	Per. Doz.
26x26, wood lined.....	$14 45
28x28, " "	16 95
30x30, " "	19 00
26x26, paper lined.....	8 15
28x28, " "	9 10
30x30, " "	10 80

Wash.
No. 760, Banner Globe (single) .....per doz. $5 25
No. 652, Banner Globe (single) .....per doz. 675
No. 801, Brass King, per doz. $ 25
No. 860, Single—Plain Pump 6 25

BOLTS.

Carriage, Machine, etc.
Carriage, cut thread, ⅜x6 and sizes smaller and shorter 60%
Carriage sizes, larger and longer than ⅜x6....50 & 5%
Machine, ⅜x4 and sizes smaller and shorter.....60 & 10%
Machine, sizes larger and longer than ⅜x4..50-10 & 5%
Stove 75%

Mortise, Door.
Gem, iron 5%
Gem, bronze plated.....5%

Barrel.
Cast .....Net
Wrought ..... "
Wrought, bronzed ..... "

Flush.
Wrought .....Net

Spring.
Wrought ..... "
Wrought, heavy ..... "

Square.
Wrought ..... "

BOXES.

Mail. No..	2	4	10
Per doz..	$18 00	$23 00	$29 00

Cast Iron.
Per doz. $9 50

Mitre.
Stanley's..... Net Prices
Stearns, No. 2..per doz. $48 00

BRACES, RATCHET.

Goodell-Pratt No. 408.....$4 60
" " No. 410..... 4 80
" " No. 412..... 5 00
V. & B. No. 444 8 in..... 4 65
V. & B. No. 333 8 in..... 4 20
V. & B. No. 222 8 in..... 4 00
V. & B. No. 111 8 in..... 3 50
V. & B. No. 11 8 in..... 3 05

BURRS, RIVETING.

Copper Burrs only.....50%
Tinners' Iron Burrs only....Net

BUTTS.

Steel, antique copper or dull brass finish—case lots—
3½x3½...per dozen pairs $2 75
4x4..... " " " 3 80
Heavy Bevel steel inside sets, case lots—
.....per dozen sets 7 50
Steel bit keyed front door sets, each 1 80
Wrought brass bit keyed front door sets, each.... 3 25
Cylinder front door sets, each 7 00

CALIPERS.

Double .....Net
Inside and Outside ..... "
Wing ..... "

CARRIERS.

Hay.
Diamond, Regular...each, nets
Diamond, Sling..... " "

CASTERS.

Standard—Ball Bearing.
.....50 & 10%
Bed 40%
Common Plate.
Brass Wheel 15%
Iron and porcelain wheels, new list 50%
Philadelphia Plate, new list 50%
Martin's 40%

CATCHERS, GRASS.

No. 160S.....per doz. $12 25
No. 165S..... " 14 01

CEMENT, FURNACE.

American Seal, 5 lb. cans, net $0 45
" " 10 lb. cans, " 90
" " 25 lb. cans, " 1 87
Asbestos, 5 lb. cans..... " 45
Pecora, 5 lb. cans..... " 45
" 10 lb. cans..... " 90
" 25 lb. cans..... " 1 87

CHAINS.

Breast Chains.
With Slide....doz. pairs, $5 50
Without Slide.. " 5 06
Doublestack .... " 9 35
With Covert Snaps " 6 33
Picture Chains.
Light brass, 3 ft., per doz. 1 25
Heavy brass, 3 ft. " 1 75
Sash Chain. (Morton's)
Steel, per 100 ft.
0 .....$2 50
2 ..... 3 10
1 ..... 3 60
Champion Metal.
0R 5 40
2R 5 60
1R 7 75
Champion Metal.—Extra Heavy.
1H $9 50
Cable Sash Chains.
Steel.....List Net Plus 15%

CHALK, CARPENTERS'.

Blue .....per gro. $2 00
Red ..... " 2 00
White ..... " 1 80
Common White School Crayon ..... " 0 30

CHIMNEY TOPS.

In bags.....per bag $1 80

CHECK, DOOR.

Corbin .....Net list
Russwin .....Net list

CHISELS.

Cold.
V. & B. No. 25, ¼ in., each $0 26
V. & B. No. 25, ⅜ in., each 41
Diamond Point.
V. & B. No. 15, ¼ in..... 0 31
V. & B. No. 15, ½ in..... 0 48
Firmer Bevelled.
Round Nose.
V. & B. No. 65, ¼ in..... 0 31
V. & B. No. 65, ½ in..... 0 40
Socket Firmer.
Cape.
V. & B. No. 50, ⅜ in..... 0 31
V. & B. No. 50, ¾ in..... 0 57

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.....List less 35-40%
Yankee, for Yankee Screw Drivers $6 00

CHURNS.

Anti-Bent Wood.

Gal.	5	7	10
Each	$3 00	$4 60	4 85

Belle, Barrell.....65 & 7½%
Common Dash,

Gal.	5	7
Per doz.....	$17 00	19 00

CLAMPS.

Adjustable.
Martin's 30%
No. 63, Screw.....20%
Cabinet.
Screw 20%
Carpenters'.
Steel Bar..List price plus 20%
Carriage Makers'.
2½-inch.....per doz $ 7 00
5 - " ..... " 14 00
8 - " ..... " 28 00
12 - " ..... " 42 00
Hose.
Sherman's brass, ¾-inch per doz. $0 48
Double, brass, ¾-inch, per doz. 1 20
Saw Filers.
Wentworth's, No. 1, $12.50; No. 2, $18.25; No. 3, $16.25.

CLAWS, TACK.

Wood hdl. No. 10..per doz. $1 15
Forged steel, wood hdl. " 2 15
Solid steel ..... " 3 25
Giant ..... " 50

CLEVISES.
Malleable .....10c lb.

CLIPPERS.
Belt (Carolus).
No. 0.....$2 50
No. 1..... 3 25
No. 3..... 4 25

CLIPS.
Axle .....65&5%
Damper.
Acme, with tail pieces, per doz. $1 25
Non Rivet tail pieces, per doz. 25
Non Rivet Clips..... 90
Hame ..... " 50c

COLLARS, STOVE PIPE.
Lacquered.
Inches..... 5 6 7
Fancy pattern, per doz.....65c 75c $4 00

COMPASSES.
Carpenters' 15%

COPPERS—Soldering.
Pointed Roofing.
3 lb. and heavier....per lb. 40c
2 lb..... " 48c
2½ lb..... " 45c
1½ lb..... " 55c
1 lb..... " 60c

CORD.
Picture.
White Wire.....60 & 5%
Sash.
Spot No. 7.....per lb. 65c
Common, No. 7..... " 40c

COTTERS, SPRING.
All sizes 87½%

COUPLINGS, HOSE
Brass .....per doz. $2 25

CUT-OFFS
Standard gauge.....35%
26 gauge.....20%

CUTTERS.
Glass.
Red Devil.....Net
Meat.
Enterprise—Nos. 5 10 12
Each $2 50 $4 25 $3 75
Nos. 22 32
" $6 50 $8 50
Pipe.
Saunder's, Nos. 1 2 3
Each $1 85 2 75 6 75
Slaw and Kraut. Per doz.
4-knife Kraut.....$20 00-55 00
3-knife Kraut, 8x27 in. 12 00-18 00
1-knife Slaw..... 2 50
2-knife Slaw..... 3 00
Washer 11 00

DAMPERS, STOVE PIPE.
Diamond.
6-inch .....per doz. $1 50

DIGGERS.
Post Hole.
Iwan's Split Handle (Eureka)
4-ft. Handle...per doz. 15 00
7-ft. Handle...per doz. 20 00
Iwan's Hercules pattern, per doz. 12 00
Dividers, Wing 25%

DRILLS.
Bench.
Blacksmiths' Twist (New List) 40%
Breast.
Millers Falls No. 12, per doz. $45 50
Millers Falls No. 112, per doz. 32 00
Hand.
Goodell's Automatic.
No. 01.....each $1 60
No. 03..... " 2 00
Goodell-Pratt No. 4½ " 3 00
Goodell-Pratt No. 379. " 4 00
Reciprocating.
Goodell's ..... " 3 20

DRIVERS, SCREW.
Standard .....Nets

EAVES TROUGH.
79% of Standard List.
Milcor .....Net

ELBOWS—Conductor Pipe.
Galvanized Steel, Tin and Terne Plain Round or Round Corrugated
2 to 6 inch, Std. gauge ..65%
2 to 6 inch, 26 gauge 45%
2 to 6 inch, 24 gauge 20%
Milcor .....Net
Square Corrugated.
Standard gauge 50%
26 Gauge 30%
Milcor .....Net
Portico Elbows.
Standard Gauge Conductor Pipe, plain or corrugated.
Not Nested .....70&5%
Nested solid .....70&5%

ELBOWS—Stove Pipe.
1-piece Corrugated, Uniform
Doz.
5-inch $1 25
6-inch 1 40
7-inch 1 80
Special Corrugated.
Doz.
6-inch $1 15
7-inch 1 60
Uniform, Collar Adjustable
Doz.
5-inch $1 60
6-inch 1 80
7-inch 2 25

FACES, WOOD—50% off list.

FENCING.
Lawn fence, single space, 36-inch .....$ 9 12
Lawn fence, single space, 42-inch 10 20
Lawn fence, double space, 32-inch 12 50
Lawn fence, double space, 42-inch 13 75
Field fence, 26-inch, No. 10 top and bottom 12 filling 26 50
Same, 6 filling..... 33 82
Field fence, 32-inch, No. 10 top and bottom 12 filling 30 34
Same, 6 filling..... 39 41

FILES AND RASPS.
Heller's (American) 70%
American 70%
Arcade .....60 & 10%
Black Diamond 50-10%
Eagle 60-10%
Great Western .....60 & 10%
Kearney & Foot .....60 & 10%
McClellan .....60 & 10%
Nicholson 50-10-10%
Simonds 60%
J. Barton Smith 50-10-5%
X F .....Net List

FIRE POTS.
Clayton & Lambert's—
East of west boundry line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas.....55%
West of above boundry line 52%
Turner Brass Works—
Ea.
No. 43 Kerosene-Gasolene Master Torch 1 qt.....$5 40
No. 48 Kerosene-Gasolene Master Torch, 1 qt..... 6 72
No. 95 Double Jet Torch, Gasolene, 1 qt..... 6 95
No. 30 Kerosene-Gasolene Torch, 1 qt. (new line). 6 48
No. 33 Single Jet Gasolene Torch, 1 qt..... 6 93
Plumbers' Furnaces.
No. 53 Galv. Iron Tank with Bulb, 7 pts..... 6 75
No. 63 Galv. Iron Tank with Pump, 7 pts.....7 47
No. 56 Straight Side Steel Tank with Bulb, 7 pts. 8 82
No. 66 Straight Side Steel Tank, with Pump, 7 pts. 9 54

GALVANIZED WARE
Per doz.
Pails (Competition), 8-qt....1 65
10-qt. 1 85
12-qt. 2 00
14-qt. 2 30
Wash tubs, No. 1..... 5 30
No. 2..... 6 00
No. 3..... 7 00

GARAGE DOOR HARDWARE
Stanley .....All net

GAUGES.
Marking, Mortise, etc.....Nets
Wire.
Disston's 25%

GIMLETS.
Discount .....65% and 10%

GLASS.
Single Strength, A and B, all sizes 85%
Double Strength, A and B, all sizes 85%

GLUE.
Bulk.
B Amber.....per lb. 35c
A white ..... " 40c
H. S. Amber..... " 32c
Liquid.
Army & Navy.....40%
Le Page's—
List "A".....37½%
List "B".....35 %
List "C".....25 %

GREASE, AXLE.
Wood Boxes.
Frazer's .....per gro. $13 00
Hub Lightning..... 7 50
Wood Pails.
Frazer's, 15 lb. $1.00; 25 lb. $1.50 each.
Hub Lightning, 15 lb. 90c; 25 lb. $1.21 each.

HAFTS, AWL.
Brad.
Common .....per doz. $0 35
Peg.
Patent, plain top " 60
Patent, leather top " 80
Sewing.
Common ..... " 24
Patent ..... " 55

HAMMERS, HANDLED.
Each, net
Blacksmiths', Hand, No. 0 26-oz. $0 87
Engineers', No. 1, 26-oz.... 87
Farriers', No. 7, 7-oz..... 97
Machinists', No. 1, 7-oz.... 67
Nail.
Vanadium, No. 41, 20-oz., each 1 45
Vanadium No. 41½, 16-oz., each 1 45
V. & B., No. 11½, 16-oz., each 1 04
Garden City, No. 111½, 16 oz., each 77
Tinner's Riveting, No. 1, 8 oz., each 72
Shoe, Steel, No. 1, 13 oz., each 65
Tack.
Magnetic.
No. 5, each..... 72

HAMMERS, HEAVY.
Farriers' 20%
Mason's.
Single and Double Face....50%

HANDLES.
Agricultural Tool.
4½-inch, plain...per doz. $3 50
Auger.
Common Assorted, per doz.$0 75
Pratt's Adjustable, Nos. 1 & 2, per doz..... 6 00
Ives' Adjustable..per set 1 35
Axe.
Hickory, No. 1....per doz. 3 00
Hickory, No. 2.... " 2 00
1st quality, second growth 6 00
Special white, 2nd growth 4 50
Chisel.
Hickory, Tanged, Firmer Assorted .....per doz. 55c
Hickory, Socket Firmer, Assorted .....per doz. 70c
Coal Pick 40%
Drifting Pick 40%
File, assorted.....per doz. 30c
Hammer and Hatchet.
No. 1, per doz.....$0 80
Second growth hickory, per doz. 1 20
Hay and Manure Fork, Handles, Strap and Ferrule.. ..... per doz. $7 00
Screw Driver.
Assorted .....each 6c
Shovel and Spade.....Net

HANGERS.
Door.
Matchless .....Net
Reliable .....Net
Richards 25%
Garage Door.
(See Garage Door Hdw.)
Conductor Pipe.
Iwan's Perfection.....50%
Milcor Perfection .....Net
Eaves Trough.
Steel hangers 30%
Triple twist wire.....10%
Milcor Eclipse .....Net
Milcor Triplex .....Net
Milcor Milwaukee .....Net

HASPS.
Hinge, Wrought, with staples, Net

HATCHETS.
Per doz.
Size No. 2 extra quality broad $16 00
Competitive Grade 12 00
No. 2 Warranted Shingling 12 00
Competitive Forged 8 00

HAY RACK BRACKETS
Wenzleman's No. 1
.....per doz. sets $18 00
Wenzleman's No. 2
.....per doz. sets 19 20

HINGES.
Blind.
Clark's Gravity
No. 1.....per set 45c
No. 2..... " 85c
Gate.
Clarks..... 1 2 3
Hgs. & Ltch, ea. 85c 1 10 2 40
Hinges only—
Upper $1 25
Lower 1 55
Latches only—
No. 1.....each 28c
No. 2..... " 28c
Screen Door.
1751—3x3 .....doz. $2 00
1753—2½x2½ ..... " 1 95
Spring.
Chicago .....Add 10% to list
Gem 25%
Matchless 40%
New Idea .....per gross $6 90
Wrought Iron.
Per 100 pairs with screws:
Light Strap Hinges, No. 3 $12 00
Heavy Strap Hinges, No. 4 15 75
Light T Hinges....No. 3 12 10
Heavy T Hinges...No. 4 20 00
Extra Heavy T Hinges, ... No. 4 21 50
Screw Hook and Strap.
6 to 12 in...per 100 lbs. $7 75
14 to 20 in... " " 7 50
22 to 36 in... " " 7 25
Screw Hook and Eye.
½ in.....per doz. pair $2 00
⅝ in..... " " 3 50
¾ in..... " " 5 00

HOES.
Garden .....Net

HOOKS.
Awning, No. 60.....Net
Belt.
Brown's .....70&5%
Jones' .....65&5%
Box.
No. 3 10 12
Each $0 29 0 77 0 36
Bush.
Common Axe Handle, per doz. $20 00
Chain.
Inch.. ¼ ⅜ 5/16 7/16 ½
Pr. 100 $7 60-8 10 9 75 11 50 12 60
Clothes Line.
Japanned....per doz. 35c—1 00
Galvanized... " 65c—2 25
Conductor.
Conductor hooks 20-10%
Milcor .....Net
Corn.
Common, riveted, red, per dz. Net
Little Giant..... " "
Grass.
Common Nos. 1 3 5 7
Per doz..$4 25 3 25 3 40 3 50
Hammock.
With plate.....per doz. $1 00
With screw..... " 95
Picture .....50%&50%&10%
Potato and Manure.....Nets

HOSE.
Per Ft.
¾-inch molded reel 13½c
¾-inch 3 ply duck.....13½c
¾-inch 4 ply duck.....16c
¾-inch 5 ply multiple.....10½c

IRONS.
Sad.
Charcoal .....per doz. $11 00
Common, polished, per 100 lbs. 7 75
No. 70 Asbestos.....$1 50 net
No. 100 " ..... 1 75 net
Common, nickel plated.. 8 25
Mrs. Pott's,
No. 50 J. Enterprise, per set Nets
No. 55 J, " " "
No. 50 T, " " "
No. 55 T, " " "

JACKS.
Wagon.
Richard's No. 1..per doz. $15 50
Oliver,
Each $0 60 $0 80
Nos. 0 00
Standard,
Each $0 60 $1 00
Nos. 1 2
Big Lift 40%
Tiger 40%

KETTLES.
Brass 15%
Cauldron .....40&5%
Copper .....per lb. 27
Maslin .....40&10%
Sugar 50%

KNIVES.
Beet Topping.
Clyde, 9-in. Scimiter Blade, doz. 25%
California 25%
Butcher.
Beechwood Handles, 6-inch blade 25%
Beechwood Handles, 7-inch blade 25%
Beechwood Handles, 3-inch blade 25%
Cooper's Hoop.....25%
Drawing.
Standard 25%
Adjustable 25%
Barton's Carpenters' 25%
Hay.
Iwan's Solid Socket.....25%
Heath's 25%
Iwan's Sickle Edge.....25%
Iwan's Imp'd Serrated....25%
Hedge.
Challenge 25%
Disston's No. 1.....25%
Putty.
Common 25%
Lander's 25%
Scraping.
Beech Handle 25%
Lander's 25%

KNOBS.
Door.
Mineral .....per doz. $2 00
Porcelain ..... " 2 00
Jet ..... " 2 00

LADDERS.
Step.
Common, per ft.....18c
Common, with Shelf, add 10c
IXL 34c
Challenge, 6 to 9 ft.....55c
10 to 16 ft.....60c

LANTERNS.
Per doz.
Monarch tin, hot blast....$ 8 25
Dietz No. 2 cold blast.... 12 00
Best tubular 8 25
Competition lanterns No. 0 tubular 6 65

LEATHER, LACE.
Rawhide ⅜-inch ....100 ft. $2 00
" ½-inch .... " 4 00

LEATHERS, PUMP.
Valve and Plunger.....Net

LEVELS.

Disston, No. 23 Asst.....$22 05
" No. 18, 20 in..each 1 83
" No. 22, 24 in..each 2 40
" Shafting, 6 in.... 19 80
" " 6 in. gr. glass 24 20
" No. 1 Asst..... 5 75
" No. 9 Asst..... 12 40
" 24-26 in. ....each 1 02
" 28-30 in. ....each 1 00

LIFTERS.

Stove Cover.
Coppered .....per gro. $6 00
Alaska ..... " 4 75
Transom.
Payson's 55%

LINES.

Jute .....per lb. 25c
Sisal ..... " 35c
Cotton ..... " 25c
Braided Cotton ..... " 52c

LINING, STOVE.

Bricks .....per crate 42c

LOCKS.

Barn Door.
No. 60 Stearns..per doz. $12 00
No. 80 " " 24 00

MACHINES

Riveting.
Stearns No. 1...per doz. $16 00
Tenoning.
No. 50 Peace's Spoke, each $16 00

MALLETS.

Carpenters'.
Fibre Head, No. 2 per doz. $16 50
" No. 3 " 19 50
" No. 4 " 28 50
Round Hickory
.....per doz. $3 00— 5 00
Tinners'.
Hickory .....per doz. $2 25

MATS.

Door.
National Rigid .....5&10&5%
Acme Steel Flexible.....50%

MEASURES.

Galvanized, doz.....Nets
Japanned, doz.....Nets

MITRES.

Galvanized steel mitres, and caps, end pieces, outlets...30%
Milcor .....Net

MOPS

Cotton, Star (Cut Ends).
Pounds 12' 15' 18' 24'-3-oz.
Per doz. $4 00 4 35 5 50 7 00
Enterprise 16⅔%
Parker .....50&5%

NAILS.

Cut Steel $4 45
Cut Iron 4 45
Wire.
Common 3 10
Cement Coated.
Small Lots 2 65
Horseshoe.
Ausable .....55&5%
Capewell 15%
Perfect .....55&5%
Putnam .....20&5%
Star .....30&5%
Picture.
Brass Heads 25%
Brads .....50&5%
Furniture .....List plus 15%

NETTING, POULTRY.

Galvanized before weaving...50%
Galvanized after weaving....40%

NIPPERS.

End Cutting.
Berg's (Swedish) In. 5 6
Per dozen.....$12 60 15 20
End and Diagonal Cutting.
Berg's (Swedish) In. 5 6
Per dozen $10 05 13 00
Hoof.
Heller's .....40&10%
V. & B., No. 52, each....$2 25

NOZZLES.

Hose.
Magic .....per doz. $9 50
Diamond ..... " 5 75

OILERS.

Chase Pattern.
Brass and Copper 10%
Zinc 20%
Railroad.
Coppered 33⅓%
Steel.
Copper Plated 50-10-5%

OPENERS.

Can.
Delmonico .....per doz. $1 30
Never Slip..... " 65
Crate.
V. & B.....per doz. $7 25-11 00

PAILS.

Cream.
14-qt. without gauge,
.....per doz. $9 50
18-qt. without gauge,
.....per doz. 11 00
20-qt. without gauge,
.....per doz. 11 75
Sap.
10-qt., IC Tin....per doz. $4 00
12 " " " " 5 50
Stock.
Galv. qts. 14 16 18 20
Per doz.$9 75 10 75 12 75 14 50

Water.
Galvanized qts. 10 12 14
Per doz.....$5 75 6 50 7 25
Wood.
Cable, 2-Hoop ...per doz. Nets
Cable, 3-Hoop ... " Nets
Cedar, 3-Hoop, brass " Nets

PANS.

Dripping .....Net
Fry.
Common .....Nets
Acme ..... "
Roasting.
Paxton,
Nos. 1 2 3 4
Per doz. .....Nets
Neverburn ..... "
Savory, No. 200..per doz. $8 40

PAPER.

Roofing. Per square
Mayor, 1-ply $1 33
" 2-ply 2 24
" 3-ply 2 65
Red Rosin .....per ton $111 45
Sand and Emery.
No. 1 per ream, best grade $5 40
No. 1, per ream, cheaper grade 4 35
Potato.
Goodell's Saratoga, 10½ in., doz. 6 50
Goodell's Saratoga, 5 in., doz. 5 50

PICKS.

Adze Eye Ore.....22½%
Drifting and Poll Picks...22½%
Plumbs, Railroad 22½%
Surface 22½%

PINCERS.

Carpenters', cast steel,
No..... 6 8 10 12
Each $0 56 0 72 $0 93 $1 02
Blacksmiths', No. 10.....$0 96
Heller's .....List plus 10%

PINS

Clothes.
Common, per box of 5 gro. $0 95
Picket.
Fluted, 15-in ....per doz. $1 10
Fluted, 21-in .... " 1 60
Spiral ..... " 1 90

PIPE.

Conductor.
Plain Round and Round Corrugated.
29 Gauge .....70&5%
28 " .....70&5%
26 " .....70&5%
24 " .....70&5%
Square Corrugated A and B and Octagon.
29 Gauge 65%
28 " 65%
26 " 65%
24 " 65%
Prices for Galvanized Toncan Metal, Genuine O. H. Iron, Lyonmore Metal and Keystone C. B. on application.
Stove. Per 100 joints
26 gauge, 5 inch E. C. nested 14 00
26 gauge, 6 inch E. C. nested 15 00
26 gauge, 7 inch E. C. nested 17 00
28 gauge, 5 inch E. C. nested 12 00
28 gauge, 6 inch E. C. nested 13 00
28 gauge, 7 inch E. C. nested 15 00
30 gauge, 5 inch E. C. nested 10 00
30 gauge, 6 inch E. C. nested 11 00
30 gauge, 7 inch E. C. nested 13 00
T-Joint Made up.
6-inch .....per 100 35 00
Furnace Pipe.
Double Wall Pipe and Fittings 40-10%
Single Wall Pipe, Round Pipe Fittings 40-10%
Galvanized and Back Iron Pipe, Shoes, etc.....40-10%
Milcor, galvanized .....Net

PLANES.

Stanley Iron Bench.....Net

PLIERS.

V. & B. No. 6.....each $0 52
" No. 7 Gas..... 0 55
" Double Duty 106 0 50
" Nut No. 3..... 0 60
Lineman's Side Cutting.
Berg's (Swedish), In. 6 7 8
Blk. Pol. Face, doz. $10 70 20 00 23 35
Long Nose Side Cutting.
Berg's (Swedish) In. 5 6
Blk. Pol. Face, doz. $12 25 15 20
Flat and Round Nose.
Berg's (Swedish)
Flat, In. 4 6 8
Blk. Pol. Face, Doz. $8 90 13 35 19 65
Berg's (Swedish) Round, In. 4 6 8
Blk. Pol. Face Doz. $11 15 16 30 22 35

POINTS, GLAZIERS.

No. 1, 2 and 3.....per doz. 75c

POINTERS, SPOKE.

Stearns' No. 1 ....per doz. $10 00
" No. 2 .... " 12 00

POKERS, STOVE.

Wr't Steel, str't or bent,
..... per doz. $0 75
Nickel Plated, coil hanl's " 1 10

PRESSES, FRUIT AND JELLY

Enterprise Manufacturing Co, 25%

PRUNERS.

Disston's Pole ....per doz. $18 00
Water's Improved, per doz. 60%

Nail.

Giant .....per doz. $14 50
Never-Slip ..... " 17 00

PULLEYS.

Awning—Jap'd 10%
Clothes Line 10%
Hay Fork.
Iron Wheel, 5-in..per doz. $2 50
Wood Wheel, 6-in. " 2 65
Wood Wheel, 6-in., pass knot ..... " 3 00

Sash.

Common .....Net
Common-Sense, 2-in .....Net
Empire Pattern, 2-in.....Net
Ideal .....Net
Steel .....Net

PUMPS.

Spray.
Midget Junior....per doz. $3 75
New Misty ..... " 6 00
Crescent ..... " 6 50

PUNCHES.

Conductors.
No. 22 .....per doz. $3 00
Machine .....per lb. 25
Saddlers'.
Common..per doz. $1 50 to $5 00
Revolving Spring.
Stearns, No. 10..per doz. $ 8 00
" No. 40.. " 16 00
" No. 60.. " 19 00
Parker Metal Punch No. OX .....each $7 00
Whitney's Ball Bearing..
.....Prices on application

PARERS.

Apple.
Goodell's .....per doz. $10 80
Turntable " 11 40
White Mountain " 8 40
Reading No. 75 " 11 40

PUTTY.

Commercial Putty, 100-lb. kits $4 75

RAKES.

Garden Per doz.
Steel, Bow, 12-inch Teeth $8 50
Steel, Bow, 14-inch " 9 25
Malleable Iron, 12-in. " 4 75
Malleable Iron, 14-in. " 5 00
Hay.
Wood, 10 Teeth.....$4 00
Lawn.
30 Teeth .....per doz. 5 50

RAZORS—SAFETY.

Gillette .....per doz. $45 00
Auto Strop ..... " 45 00
Gem ..... " 8 40
Gem (3 doz. lots).. " 8 00
Ever Ready ..... " 8 40
Ever Ready (3 dz. lots) " 8 00

RAZORS—STRAIGHT.

RAZOR STROPS.

Star (Honing) 50%

REGISTERS.

Cast Iron 25%
Steel and Semi-Steel.....40%
Baseboard 40%
Adjustable Ceiling Ventilators 40%
Register Faces—Cast and Steel
Japanned, Bronzed and Plated.
4x6 to 14x14.....40%
Large Register Faces—Cast, 14x14 to 38x42.....60%
Large Register Faces—Steel, 14x14 to 38x42.....60%

RIDGE ROLL.

Galvanized.
Crated 70-25%
Wired 70-25-5%
Milcor .....Net

RINGS AND RINGERS.

Pull.
Copper .....2½-in. 3-in.
Per doz. $2 40 $2 65
Rea's Improved Self-Piercing copper,
..... doz. $ 40
Steel, per doz..... 1 50 1 80
Fruit Jar.
White .....per lb. 80

RIVETS.

Copper Belt .....50% Discount
Coppered Iron 50%
Tinners' 50%
Hame per lb. $0 17
Slotted Clinch per doz. 60 @ 1 10
Tubular.
Nos. 1 and 2 assorted sizes, 50 in box.....dox. 75c
Nos. 1 and 2 assorted sizes, 10 in box.....dox. 1 40

ROPE.

Cotton.
¼, 5-16 in. Com. on reels, per lb. 30c
¼, 5-16 in. Com., in coils, per lb. 30c
Sisal.
1st Quality, base 14½c to 15½c
No. 2.....13c to 14c
Manila.
1st Quality standard brands .....17½c to 18½c
No. 2 .....16c to 16½c
Hardware Grade, per lb. 13½c
Pure Manila.
1st Quality, base, per lb. .....17¾c to 18½c
Hardware Grade, per lb. 11½c

SAWS.

Butchers'.
Atkins No. 2, 14-in.....$12 20
" No. 2, 18-in..... 13 70
" No. 7, 16-in..... 15 20
" No. 2, 22-in..... 15 35
" No. 7, 20-in..... 17 30
" No. 7, 24-in..... 19 35
" No. 7, 28-in..... 21 40
Compass.
Atkins No. 2, 10-in.....$ 4 95
" No. 10, 10-in..... 5 10
" Blades, No. 2, 10-in. 3 95
" " No. 2, 10-in. 3 00
Cross-Cut.
Atkins No. 221, 4-ft..... 2 70
" No. 221, 6-ft..... 4 10
" No. 221, 8-ft..... 5 45
Flooring.
Atkins No. 96, 16-in..... 19 95
" No. 96, 20-in..... 21 85
Hand and Rip.
Atkins No. 54, 20-in..... 17 75
" No. 54, 26-in..... 22 10
" No. 53, 16-in..... 16 45
" No. 53, 20-in..... 20 80
" No. 53, 24-in..... 24 30
" No. 53, 28-in..... 28 60
" No. 53, 30-in..... 31 95
Keyhole.
Atkins No. 1, complete.. 2 80
" No. 2, complete.. 3 35
Miter Box.
Atkins No. 1, 4x20..... 29 70
" No. 1, 5x22..... 34 55
" No. 1, 6x22..... 38 35
Pruning.
Atkins No. 20, 12-in.... 7 70
" No. 10, 16-in.... 16 50
Wood.
Atkins No. 202..... 8 50
" No. 318..... 10 05
" No. 906..... 15 65
" No. 1509..... 18 40

SCOOPS

Hubbard Western Pattern Riveted.

Size	A	B	C	D
1..	$16 75	16 00	15 25	14 45
4..	17 85	17 10	16 35	15 60
6..	18 65	17 85	17 10	16 35

SCRAPERS.

Box.
Triangular No. 6 per doz. $6 25
Road.
Cubic ft. 7 5 3
With runners,ea. $7 00 6 50 6 20

SCREEN DOOR HINGES.

Cast Iron .....gross $13 00
Steel ..... " 9 50

SCREWS.

Bench.
Iron, Ins. 1 1½ 1 1½
$6 82 7 87 9 45 16 80
Wood, white maple, per doz. 6 00
Hand—Wood 50%
Hand Rail 22%
Jack 30%
Lag or Coach—all sizes, gimlet pointed 60%
Saw—Centennial,
Nos. 1 2 3 4
Per doz.....47c 55c 75c 90c
Wood.
F. H. Bright .....82½ & 20%
R. H. Blued .....80 & 20%
F. H. Jap'd .....75 & 20%
F. H. Brass .....77½ & 20%
R. H. Brass .....75 & 20%
Sheet Metal.
No. 7, ½x½, per gross..$ .55
No. 10, ¾x3/16 per gross.. .75
No. 14, ¾x¼ per gross.... .90

SCYTHES.

Clipper, Grass....per doz. $13 50
Honest Dutchman " 13 00

SETS.

Nail.
Square head.....per doz. 1 84
Cup point, knurled " 1 78

Rivet.
Farmers' 0 19
Tinners' 3-4 ..... 0 40
" 00-0 ..... 0 60

Saw.
Atkins No. 10....per doz. $3 80
" No. 12.... " 6 20
Disston's Monarch No. 2..... " 9 90
Disston's Monarch No. 12..... " 13 20
Leach's ..... " 80
Nash's Hand .... " 3 15
Nash's X-Cut .... " 4 20
Stillman's Lever.. " 1 30
Stillman's X-Cut.. " 2 50
Whiting Pattern, No. 21 ..... " 7 50
Eccentric Anvil, Hand No. 395, N. P. Norrill Pattern ..... " 14 50

SHEARS.

	Per Doz.
Nickel Plated, Straight, 6"	$12 90
" " " 7"	14 85
" " " 8"	16 80
Japanned, Straight ....6"	11 00
" " ....7"	12 40
" " ....8"	13 80

SHEAVES, SLIDING DOOR.

Common. Inches	3	4	5
Per set	$1 40	1 75	2 40

Hatfield's.
Per set $1 80 2 10 2 75 25

SHINGLES.

Per Square
Zinc (Illinois) $15 00

SHOES.

Conductor 60%

SHOVELS AND SPADES.

Coal.

Hubbard's No.	A	B	C	D
1	$16 00	15 10	14 45	13 70
2	16 35	15 60	14 85	14 10
3	16 75	16 00	16 25	14 45
4	17 10	16 35	16 60	14 85

Post Drains & Ditching.

Hubbard's Size	A	B	C
14"	17 15	16 40	15 65
16"	17 50	16 75	16 00
18"	17 85	17 10	16 35
20"	18 20	17 45	16 70
22"	18 55	17 80	17 05

Alaska Steel.
D-Handle .....per doz. $3 50
Long Handle ..... " 3 00

SKATES.

Roller.
Ball Bearing—Boys' $1 50
Ball Bearing—Girls' 1 60

SNAPS, HARNESS.

Covered Spring .....Add 30%
Judd's Pattern Add 33 1-6% to list

SNATHS.

Double Ring Bush..per doz. $ 9 75
Patent Loop, Bush.. " 10 00
Patent Loop, Grass. " 8 75

SNIPS, TINNERS'.

Clover Leaf .....40&10%
National .....40&10%
Star 50%
Milcor .....Net

SPRINGS, DOOR.

Perfect.

Nos.	2	3	4	5	6	7
Per doz.	45c	50c	55c	65c	80c	90c

Reliance.

	Light	Medium	Heavy
Per doz...	$1 80	2 40	3 75

Torrey's .....per doz. 1 65

SPRINKLERS, LAWN.

Stearn's No. 1....per doz. $11 50

SQUARES.

Steel and Iron.....Net
(Add for bluing, $3.00 per doz. net)
Mitre ..... "
Try ..... "
Try and Bevel..... "
Try and Miter..... "
Fox's .....per doz. $6 00
Winterbottom's 10%

STAPLES.

Blind.
Barbed .....per lb. 21@22c
Butter, Tub ..... " 16@19c

Fence—
Polished .....per 100 lbs. $5 45
Galvanized ... " 6 15

Netting.
Galvanized ....per 100 lbs. 6 54

Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples .....50&10%
Extra heavy 35%

STONES.

Axe.

	per lb.	New Nets
Hindostan .....per lb.		
More Grit	"	"
Washita	"	"

Emery.
No. 126.....per doz. New Nets

Oil—Mounted.

Arkansas Hard No. 7 .....per doz.	New Nets
Arkansas Soft "	"
Washita No. 717 "	"

Oil—Unmounted.

Arkansas Hard per lb.	New Nets
Arkansas Soft "	"
Lily White .. "	"
Queer Creek.. "	"
Washita ..... "	"

Scythe.

Black Diamond per gro.	New Nets
Crescent ..... "	"
Green Mountain "	"
LaMolle ..... "	"
Extra Quinnebog ..... "	"
Red End ..... "	"

STOPS, BENCH.

No. 10 Morrill pattern ..... per doz. $11 00
No. 11 Stearns pattern ..... " 10 00
No. 15 Smith pattern " 7 00

STOPPERS, FLUE.

Common .....per doz. $1 10
Gem, flat, No. 3... " 1 00
Gem, No. 1..... " 1 10

STRETCHERS.

Carpet.
Bullard's .....per doz. $3 90
Excelsior ..... " 5 25
Malleable Iron... " 70
Perfection ..... " 8 20
King ..... " 4 50

Wire.
O. S. Elwood, No. 1 per doz. Nets
O. S. Elwood, No. 2 " "

SWIVELS.

Malleable Iron .....per lb. $0 10
Wrought Steel ....per gro. 4 50

TACKS.

Bill Posters' 6-oz., 25-lb. boxes per lb. 15c
Upholsterers' 6-oz., 25-lb. boxes, per lb.....15½c

TAPES, MEASURING.

Asses' Skin .....List&40%

THERMOMETERS.

Tin Case.....per doz. 80c&$ 1 25
Wood Back... " $2 00& 12 00
Glass ..... " 12 00

TIES.

Bale.
Single Loop, carload lots .....75&7%
Single Loop, less than car lots .....70&15%

TRAPS.

Game with Chains.	Per doz.
Victor No. 1.....	$1 83
Oneida Jump No. 1.....	2 20
Newhouse No. 1.....	4 85

Mouse and Rat.	List per gross.
Sure Catch Mouse Traps.	$ 2 70
Vim Mouse Traps.....	3 70
Short Stop Mouse Traps.	3 20
Wood Choker Mouse Traps, 4 hole.....	17 00
Sure Catch Rat Traps....	16 00
Vim Rat Traps.....	16 00
Short Stop Rat Trap....	15 00
Dead Easy Rat Traps....	17 00
Star Rat Traps.....	50 00
Erie	54 00

Packed in One Bushel Band Stave Baskets.

	List per bushel.
Sure Catch Mouse Traps (360 Traps) .....$	9 30
Short Stop Mouse Traps (360 Traps)	8 00
Sure Catch Rat Traps (54 Traps)	6 00
Short Stop Rat Traps (54 Traps)	5 60

Assorted Mouse and Rat Traps.	List per bushel
Sure Catch (216 Mouse Traps and 26 Rat Traps)	$3 50
Short Stop (216 Mouse Traps and 26 Rat Traps)	7 50

TROWELS.

Cement.
Atkins No. 6..... 19 50
" No. 9..... 25 50
Disston's 30%

TUBS, WASH.

Standard, Wood. Nos.	2	3	1	Ex. large
Per doz.	$9 50	11 25	12 75	15 50

Galvanized. No.	1	2	3
Per doz.	13 75	15 95	18 60

ADVERTISERS' INDEX

The dash (—) indicates that the advertisement does not appear in this issue.

Please mention
AMERICAN ARTISAN
AND
HARDWARE RECORD
when writing to advertisers

TWINE.

White Cotton.
Eureka, 4-ply.....per lb. 30c

Jute.
3-ply and 6-ply Bale Lots.22½c

VALLEY.

Formed Valley Galvanized Steel 60-5%
Milcor .....Net

VISES.

No. 700, Hand, Inches	4½	5	5½
Doz.	$11 15	13 00	14 85

No. 701. In.	4	5	6
Doz.	$11 15	13 00	16 70

No. 1, Genuine Wentworth, Noiseless Saw....per doz. 15 00
No. 2, Genuine Wentworth, Noiseless Saw....per doz. 22 50
No. 3, Genuine Wentworth, Noiseless Saw....per doz. 20 00
No. 500, All Steel Folding Saw .....per doz. 16 00

WASHERS.

Standard O. G. cast iron, per lb. 3¾c
Wrought steel in 5-lb. boxes, per lb.:

In.	3/16	¼	5/16	⅜	½
	15c	14c	12c	11c	10c
	⅝	¾	⅞	1	
	9½c	9c	8c	8c	

WEDGES.

Ax.	per doz. Nets
Galling .....per lb.	Nets
Saw .....per lb.	8½

WEIGHTS.

Hitching .....per lb. Nets
Sash—f. o. b. Chicago.
Ton lots, per ton.....$36 00
Smaller lots, per ton..... 37 50

WHEEL BARROWS.

Common Wood Tray.....$3 00
Steel Tray 4 50
Angle leg, garden..... 5 75

WHEELS

Carborundum 50%
Emery 60%

Well, Ins.....	8	10	12
Per doz.....$5 50	7 25	8 50	

12-in. heavy hoisting, per doz. $25 00

WIRE.

Black annealed wire, No. 8 per 100 lbs.....$2 85
Galvanized barb wire, per 100 lbs. ..... 2 [illegible]
Wire cloth — black painted, 12-mesh, per 100 sq. ft.... 1 90
Cattle Wire—galvanized catch weight spool, per 100 lbs. 3 65
Galvanized Hog wire, 80 rod spool, per spool..... 3 23
Galvanized plain wire, No. 8, per 100 lbs..... 3 35

WOOD FACES.

50% off list.

WRENCHES.

Coes Steel Handle,	6-in.	60%
" " "	8-in.	60%
" " "	10-in.	60%
" " "	12-in.	60%
Coes Knife-Handle,	6-in.	60%
" " "	8-in.	60%
" " "	10-in.	60%
" " "	12-in.	60%

Coes All Patterns.....60%

Knife Handle Pattern.
No. 63, Screw Wrench, List plus 30%
No. 60, Steel Handle.....30%

WRINGERS.

No. 790, Guarantee, per doz.		$55 50
No. 770, Bicycle ...	"	52 50
No. 670, Domestic .	"	49 00
No. 110, Brighton ..	"	44 00
No. 760, Guarantee	"	55 50
No. 740, Bicycle ...	"	52 50
No. 22, Pioneer ...	"	41 00
No. 2, Superb	"	29 00

CLASSIFIED INDEX

Bail Ties.
American Steel & Wire Co., Chicago, Ill.

Bearings—Damper.
Parker Supply Co., New York, N. Y.

Belts—Stove.
Kirk-Latty Mfg. Co., Cleveland, Ohio

Brakes—Cornice.
Dreis & Krump Mfg. Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.

Brushes—Furnace.
Hardware Specialty Co., Fort Wayne, Ind.

Brass and Copper.
American Brass Co., Waterbury, Conn.
Hussey & Co., C. G., Pittsburgh, Pa.
Copper & Brass Research Ass'n., New York, N. Y.

Builders' Hardware.
Bullard & Gormley, Chicago, Ill.

Burners—Oil.
McEwen Furnace Co., Kansas City, Mo.
Standard Fdy. & Mfg. Co., Kansas City, Mo.

Cans—Garbage.
Osborn Co., The J. M. & L. A., Cleveland, Ohio

Castings—Malleable.
Fanner Mfg. Co., Cleveland, Ohio

Ceilings—Metal.
Burton Co., W. J., Detroit, Mich.
Friedley-Voshardt Co., Chicago, Ill.
Hopson Co., W. C., Grand Rapids, Mich.
Milwaukee Corrugating Co., Milwaukee, Wis.

Chain—Furnace
American Chain Co. Bridgeport, Conn.

Chain—Sash.
Parker Supply Co., New York, N. Y.

Chaplets.
Fanner Mfg. Co., Cleveland, Ohio

Chisels.
Vaughan & Bushnell Mfg. Co., Chicago, Ill.

Clips—Damper.
Carr Supply Co., Chicago, Ill.
Waterloo Register Co., Waterloo, Iowa

Coal Chutes.
Peerless Foundry Co., Indianapolis, Ind.
Sykes Co., The, Chicago, Ill.

Coasters.
Auto-Wheel Coaster Co., No. Tonawanda, N. Y.

Cores—Auto Radiator.
Curfman Mfg. Co., F. L., Maryville, Me.
G. & O. Mfg. Co., New Haven, Conn.
Zarco Mfg. Co., New York, N. Y.

Cornices.
Burton Co., W. J., Detroit, Mich.
Friedley-Voshardt Co., Chicago, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.

Cut-Offs—Rain Water.
Sullivan-Geiger Co., Indianapolis, Ind.

Doors—Fire.
Messenger & Parks Mfg. Co., Aurora, Ill.

Dry Paste.
Carr Supply Co., Chicago, Ill.

Eaves Trough
Abbott Mfg. Co., Cleveland, Ohio
Berger Bros. Co., Philadelphia, Pa.
Burton Co., The W. J., Detroit, Mich.
Clark-Smith Hardware Co., Peoria, Ill.
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Jersey Zinc Co., The, New York, N. Y.

Elbows and Shoes—Conductor.
American Rolling Mill Co., Middletown, Ohio
Dieckmann Co., Ferdinand, Cincinnati, Ohio
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.

Elevators—Hand and Power.
Kimball Bros. Co., Council Bluffs, Iowa

Enamel—Iron.
Black Silk Stove Polish Works, Sterling, Ill.

Enamel Ware.
Lalance & Grosjean Mfg. Co., Chicago, Ill.

Enamels—Wood.
Cornish & Co., J. B., Chicago, Ill.
Federal Varnish Co., Chicago, Ill.

Fence Gates.
American Steel & Wire Co., Chicago, Ill.

Fenders.
Meyers Mfg. Co., Fred J., Hamilton, Ohio

Files.
Heller Bros. Co., Newark, N. J.

Furnace Rings.
Walworth Run Fdy. Co., Cleveland, Ohio

Garages—Metal.
Thomas & Armstrong Co., The, London, Ohio

Guards—Fire.
Meyers Mfg. Co., Fred J., Hamilton, Ohio

Hammers.
Vaughan & Bushnell Mfg. Co., Chicago, Ill.

Handles—Boiler.
Berger Bros. Co., Philadelphia, Pa.

Handles—File.
Parker Supply Co., New York, N. Y.

Hangers—Eaves Trough.
W. C. Hopson Co., Grand Rapids, Mich.

Heaters—Combination Hot Water.
Melbye Bros. Co., Chicago, Ill.

Heaters—School Room.
Haynes-Langenberg Mfg. Co., St. Louis, Mo.
Meyer Furnace Co., Peoria, Ill.
Monroe Fdy. & Furnace Co., Monroe, Mich.
Peerless Foundry Co., Indianapolis, Ind.
Standard Furnace & Supply Co., Omaha, Neb.

Heaters—Warm Air.
American Furnace Co., St. Louis, Mo.
Carr Supply Co., Chicago, Ill.
Dunning Heating Supply Co., Milwaukee, Wis.
Farquhar Furnace Co., The, Wilmington, Ohio
Farris Furnace Co., Springfield, Ill.
Forest City Fdy. & Mfg. Co., Cleveland, Ohio
Fox Furnace Co., Elyria, Ohio
Hall-Neal Furnace Co., Indianapolis, Ind.
Haynes-Langenberg Mfg. Co., St. Louis, Mo.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Hess-Snyder Co., Massillon, Ohio
Independent Stove Co., Owosso, Mich.
Kruse Co., Indianapolis, Ind.

Heaters—Warm Air—Continued
Lamneck Co., W. E., Columbus, Ohio
Lennox Furnace Co., Marshalltown, Iowa
Manny Heating Supply Co., Chicago, Ill..
Meyer Furnace Co., Peoria, Ill.
Michigan Stove Co., The, Detroit, Mich.
Monroe Fdy. & Furnace Co., Monroe, Mich.
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Illinois
Orbon Stove Co., Bellville, Illinois
Peerless Foundry Co., Indianapolis, Ind.
Premier Warm Air Heater Co., Dowagiac, Mich.
Scheible-Moncrief Heater Co., Cleveland, Ohio
Schwab & Sons Co., R. J., Milwaukee, Wis.
Standard Fdy. & Mfg. Co., Kansas City, Mo.
Standard Furnace & Supply Co., Omaha, Neb.
St. Louis Heating Co., St. Louis, Mo.
Utica Heater Co., Utica, N. Y.
Waterloo Register Co., Waterloo, Iowa

Horse Shoes.
American Steel & Wire Co., Chicago, Ill.

Humidifiers.
Haynes, Kansas City, Mo.

Jobbers—Hardware.
Bullard & Gormley Co., Chicago, Ill.
Clark-Smith Hardware Co., Peoria, Ill.

Kitchen Utensils.
Lalance & Grosjean Mfg. Co., Chicago, Ill.

Ladders.
Walchli Mfg. Co., St. Louis, Mo.

Lath—Expanded Metal.
Milwaukee Corrugating Co., Milwaukee, Wis.

Machines—Crimping.
Bertsch & Co., Cambridge City, Ind.

Machinery—Culvert.
Bertsch & Co., Cambridge City, Ind.

Machines—Razor Blades.
Hyfield Mfg. Co., New York, N. Y.

Machines—Stove Pipe.
Hemp & Co., St. Louis, Mo.

Machines—Tinsmiths'.
Bertsch & Co., Cambridge City, Ind.
Dreis & Krump Mfg. Co., Chicago, Ill.
Ewert & Kutscheid Mfg. Co., Chicago, Ill.
Hemp & Co., St. Louis, Mo.
Maplewood Machinery Co., Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Mailing Lists.
Ross-Gould, St. Louis, Mo.

Metals—Perforated.
Harrington & King Perforating Co., Chicago, Ill.

Miters.
Friedley-Voshardt Co., Chicago, Ill.

Nails—Slating.
Hussey & Co., C. G., Pittsburgh, Pa.

Nails—Wire.
American Steel & Wire Co., Chicago, Ill.

Ornaments—Sheet Metal.
Friedley-Voshardt Co., Chicago, Ill.
Gerock Bros. Mfg. Co., St. Louis, Mo.

Patterns—Furnace and Stove.
Cleveland Castings Pattern Co., Cleveland, Ohio
Quincy Pattern Co., Quincy, Ill.
Shaw & Son Co., The Geo. E., Cleveland, Ohio
Vedder Pattern Works, Troy, N. Y.

Pipe and Fittings—Furnace.
Carr Supply Co., Chicago, Ill.
Dunning Heating Supply Co., Milwaukee, Wis.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Lamneck Co., W. E., Columbus, Ohio
Manny Heating Supply Co., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Standard Furnace & Supply Co., Omaha, Neb.

Pipe and Fittings—Stove.
Hemp & Co., St. Louis, Mo.
Meyer & Bro. Co., F., Peoria, Ill.
Sullivan-Geiger Co., Indianapolis, Ind.

Pipe—Conductor.
Berger Bros. Co., Philadelphia, Pa.
Burton Co., W. J., Detroit, Mich.
Clark-Smith Hdw. Co., Peoria, Ill.
Dieckmann Co., Ferdinand, Cincinnati, Ohio
Friedley-Voshardt Co., Chicago, Ill.
Hussey & Co., C. G., Pittsburgh, Pa.
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Jersey Zinc Co., The, New York, N. Y.

Polish—Metal and Stove.
Black Silk Stove Polish Works, Sterling, Ill.

Posts—Steel Fence.
American Steel & Wire Co., Chicago, Ill.

Punches.
Bertsch & Co., Cambridge City, Ind.
Whitney Mfg. Co., W. A., Rockford, Ill
Whitney Metal Tool Co., Rockford, Ill.

Punches—Combination Bench and Hand.
Parker Supply Co., New York, N. Y.
Whitney Metal Tool Co. Rockford, Ill.

Punches—Hand.
Parker Supply Co., New York, N. Y.
Whitney Metal Tool Co. Rockford, Ill.

Quadrants—Damper.
Parker Supply Co., New York, N. Y

Ranges—Combination Gas & Coal.
American Stove Co., St. Louis, Mo.
Hoosier Stove Co., Marion, Ind.
Independent Stove Co., Owosso, Mich.
Malleable Iron Range Co., Beaver Dam., Wis.
Matthews Banner Range Co., South Bend, Ind.
Quick Meal Stove Co., St. Louis, Mo.

Ranges—Gas.
American Stove Co., St. Louis, Mo.
Clark & Co., Geo. M., Chicago, Ill.
Dangler Stove Co., Cleveland, O.
Hoosier Stove Co., Marion, Ind.
Matthews Banner Range Co., South Bend, Ind.
Quick Meal Stove Co., St. Louis, Mo.